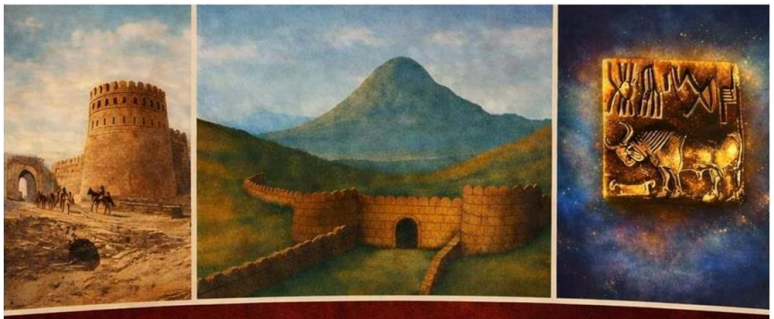
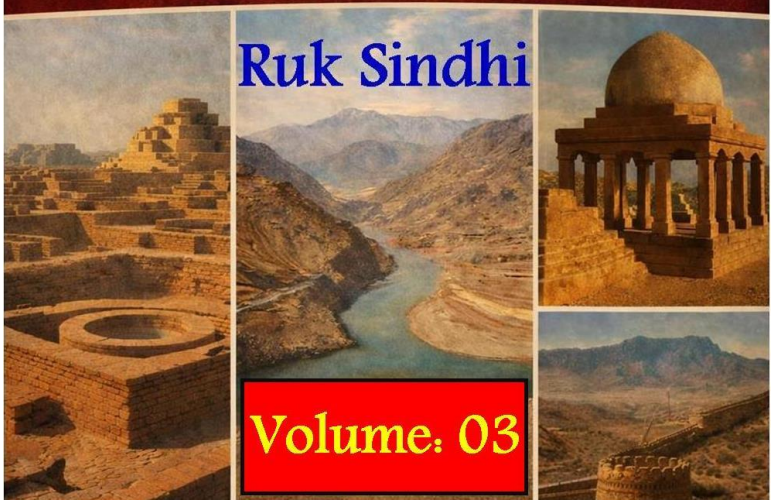


Ancient Cities of the Indus Civilization

Ruk Sindhi



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Ancient Cities of the Indus Civilization

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Ruk Sindhi

Karachi

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Preface

The Indus Valley Civilization is one of the oldest, most advanced, and best-organized civilizations in the world. It established enduring examples of urban planning, trade, industry, agriculture, culture, and intellectual development in human history. The cities of this civilization occupy a unique place in world history because of their sophisticated engineering, organized social structure, and extensive international trade networks.

In my book, **"Ancient Cities of the Indus Civilization,"** I present a detailed study of the archaeological sites and urban centers associated with the Indus Civilization. These sites are located not only in Sindh and other regions of Pakistan but also extend across India and Afghanistan. According to modern archaeological research, more than two thousand Indus Civilization sites have been discovered in Pakistan, India, and Afghanistan. While many important cities and settlements have been brought to light through excavation, a large number of sites still await

comprehensive scientific investigation and archaeological exploration.

This book provides detailed and carefully compiled information on more than 136 ancient cities, villages, and settlements. The work consists of four volumes, each comprising approximately three hundred pages. Collectively, these volumes cover more than 136 archaeological sites associated with the Indus Civilization. Each volume systematically examines the historical background, archaeological remains, cultural connections, economic activities, and various aspects of urban life related to these ancient centers.

This book is not merely the outcome of academic research; it is also a serious effort to reintroduce the greatness of the Indus Civilization within a global context. Special attention has been given to urban planning, river systems, trade routes, cultural continuity, and interregional connections. Through this approach, readers will gain a deeper understanding of the historical significance of the Indus Civilization and its fundamental contribution to the development of human civilization.

"Ancient Cities of the Indus Civilization" is an important scholarly resource for researchers, students, teachers, historians, and general readers

alike. It is hoped that this work will encourage new directions in the study of the ancient history and cultural heritage of Sindh and the broader South Asian region, while also strengthening global awareness of the Indus Civilization.

This remarkable heritage of the Indus Civilization is not merely a legacy of the past; it is a luminous chapter in the intellectual, social, and cultural journey of humanity. Its scientific study, preservation, and promotion remain a collective responsibility for all of us.

Ruk Sindhi

Karachi, June 2026

Chapter One

Ancient Cities of the Indus Civilization

The Indus Civilization is one of the world's oldest and most prosperous human civilizations. Compared with its contemporary civilizations of Egypt and Mesopotamia, it left a deeper impact across a much wider geographical region. Modern archaeological excavations and scientific research have demonstrated that this civilization was not confined to a single limited area; rather, it represented a highly organized, peaceful, and advanced society whose foundations were laid approximately 9,500 years ago.

1. Geographic Extent and Present-Day Boundaries

When viewed through the lens of modern political and geographical boundaries, the archaeological sites of the Indus Civilization are found throughout all provinces of present-day Pakistan (Sindh, Balochistan, Punjab, and Khyber

Pakhtunkhwa), as well as in parts of Afghanistan (such as Shortugai) and various states of India, including Gujarat, Rajasthan, Haryana, and Punjab.

Approximately 9,500 years ago, these regions collectively fell within the social, economic, and political sphere of influence of the people who developed and sustained the Indus Civilization. Archaeological surveys and excavations conducted to date have identified nearly 2,000 sites associated with this civilization. While some of these sites have undergone systematic scientific excavation, many others remain as unexplored mounds and ruins, still awaiting the revelation of the historical secrets concealed within them.

2. Chronology of the Indus Civilization

The Indus Civilization evolved through several developmental stages, progressing from an early village-based culture to a highly sophisticated urban civilization. Archaeological evidence suggests that many of its settlements remained occupied from approximately 7500 BCE until around 1500 BCE. For a clearer understanding of its historical development, the civilization may be divided into three major phases:

A. The Earliest Period: The Beginning of Rural Development

The oldest foundations of this civilization date back to around 7500 BCE.

- **Lakhan-jo-Daro:** Considered one of the earliest proto-urban and industrial developmental sites within the broader Indus cultural sphere.
- **Mehrgarh:** A site where human communities first abandoned a purely hunting-based lifestyle and began building permanent settlements, domesticating animals, and practicing agriculture through the cultivation of crops and vegetables.
- **Kili Gul Muhammad (c. 4200 BCE):** This site reflects further cultural development during the early period, providing evidence for some of the earliest forms of pottery production.

B. Early Phase: The Rural Cultural Tradition (Early Harappan Phase)

This period extends roughly from 3500 BCE to 2300 BCE. During this era, communities learned to establish permanent villages and develop distinctive local cultural traditions. Important settlements of this phase include:

- **Amri (Dadu, Sindh):** Famous for its distinctive painted pottery and for illustrating the cultural evolution that preceded the urban phase.
- **Kot Diji (Khairpur, Sindh):** Known for its fortification walls and early use of baked bricks, features that later became fundamental elements of Indus urbanism.

C. The Zenith of Urban Civilization (Mature Harappan Phase)

This represents the most advanced and flourishing stage of the Indus Civilization. During this period, architecture, urban planning, drainage systems, and trade reached remarkable levels of sophistication. Major urban centers of this phase include:

- **Mohenjo-daro (Larkana, Sindh):** Renowned worldwide for its Great Bath, well-planned streets, and highly developed civic administration.
- **Harappa (Punjab):** Another major political and commercial center of the civilization, where numerous seals, tools, and other artifacts have been discovered.
- **Chanhu-daro (Shaheed Benazirabad/Nawabshah, Sindh):** A specialized industrial center known for the

manufacture of carnelian beads, cosmetic items, and various craft products.

3. Foundations of Modern Scientific Research

In the second edition of this book, detailed research articles are presented on several of the most significant and foundational settlements of the Indus Civilization.

The study of these ancient sites is not based on legends or speculative narratives; rather, it relies upon evidence obtained through modern scientific methods, including radiocarbon dating, satellite mapping, archaeobotany, and other archaeological techniques. This book aims to guide readers through the remarkable heritage of the past—a heritage that remains a source of pride for Sindh and the wider region today.

Mamro

Introduction

Mamro is an important archaeological site located in Sukkur District, Sindh, approximately three miles east of Rohri. The site has yielded significant archaeological remains, including traces of residential architecture, flint artifacts, and pottery fragments. These discoveries indicate that Mamro was a well-established settlement associated with the urban phase of the Indus Civilization. The site contributes valuable evidence for understanding settlement patterns, architecture, and daily life in ancient Sindh during the Mature Harappan period.

Geographical Location

Mamro is situated in the Rohri region, an area known for its rich archaeological heritage and abundant sources of flint stone. The proximity of the site to the Rohri Hills, famous for their prehistoric flint quarries, suggests that the inhabitants may have had access to important raw

materials used in tool production and trade networks throughout the Indus Civilization.

Archaeological Discoveries

Archaeological investigations at Mamro have revealed the remains of residential structures, providing important insights into the settlement's organization and construction techniques. The foundations of the houses were built with baked bricks, a characteristic feature of the urban centers of the Indus Civilization.

Among the notable discoveries are:

- Remains of residential buildings constructed on baked-brick foundations.
- Flint artifacts, indicating the use of stone tools and access to Rohri's flint resources.
- Pottery fragments representative of Harappan ceramic traditions.
- A well discovered within the residential area, demonstrating an organized water supply system.
- Earthenware vessels used for domestic purposes.
- Terracotta toys belonging to children, reflecting aspects of family and social life.
- Stone weights used for measurement and trade, suggesting participation in the

standardized economic system characteristic of the Indus Civilization.

Cultural Significance

The discovery of baked-brick architecture, wells, terracotta toys, and standardized stone weights demonstrates that Mamro shared many cultural and technological characteristics with other urban settlements of the Indus Civilization. The presence of weights is particularly significant, as it indicates involvement in commercial activities and adherence to the uniform system of measurement that facilitated trade across the Indus world.

The terracotta toys provide evidence of childhood activities and social life, while the well highlights the advanced water-management practices for which the Indus Civilization is renowned.

Conclusion

Mamro represents an important urban settlement of the Indus Civilization in the Rohri region of Sindh. The remains of houses built on baked-brick foundations, the discovery of a well, pottery, terracotta toys, flint artifacts, and stone weights collectively demonstrate a developed and organized community. The site contributes significantly to our understanding of urban life,

economic activities, and material culture in the Indus Civilization and underscores the archaeological importance of the Sukkur–Rohri region.

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Markhan

Abstract

Markhan is an important archaeological site located in Badin District, Sindh, Pakistan. Situated approximately 15 kilometers southeast of Badin city, the site has yielded archaeological remains indicating its association with the urban phase of the Indus Valley Civilization. Although extensive excavations have not yet been conducted, surface findings suggest the presence of an organized settlement characterized by the cultural and material traits of the Indus Civilization. This article examines the geographical setting, archaeological significance, and historical importance of Markhan within the broader context of the Indus cultural landscape.

Introduction

The district of Badin, located in the southeastern region of Sindh, contains numerous archaeological sites that contribute significantly to the

understanding of the Indus Valley Civilization. These sites provide valuable evidence regarding the settlement patterns, economic activities, and cultural developments of ancient communities. Among them, Markhan stands out as an important archaeological locality. The remains discovered at the site indicate that it belonged to the urban cultural tradition of the Indus Civilization, one of the world's earliest urban societies.

Geographical Location

Markhan is situated approximately 15 kilometers southeast of Badin city. Historically, the Badin region occupied a strategic position near ancient riverine and coastal routes, facilitating communication, trade, and agricultural development. The environmental conditions of the area would have supported permanent human settlement through access to water resources and fertile lands. Like many other Indus settlements, Markhan appears to have developed within a favorable ecological setting that encouraged long-term habitation.

Archaeological Characteristics

Archaeological remains recovered from Markhan suggest that the site was part of an organized urban settlement. Although systematic excavation

has yet to be undertaken, surface evidence indicates sustained human occupation and cultural activity. Pottery fragments, traces of architectural structures, and other material remains point to a community that shared characteristics with other urban centers of the Indus Civilization.

The urban settlements of the Indus Civilization are known for their planned architecture, craft production, trade networks, and social organization. The available evidence from Markhan reflects a similar cultural background, suggesting that its inhabitants participated in the broader economic and social systems that connected settlements throughout the Indus region.

Historical and Cultural Significance

Markhan is particularly significant because it is located in the lower Sindh region, an area that played an important role in the geographical expansion of the Indus Civilization. The study of such sites helps archaeologists understand that the Indus urban system was not limited to major cities such as Mohenjo-daro and Harappa but also included numerous small and medium-sized settlements interconnected through trade, administration, and cultural exchange.

The archaeological evidence from Markhan contributes to our understanding of settlement distribution and cultural development in southern Sindh. Further investigation of the site could reveal important information regarding regional interaction, economic activities, and the relationship between coastal and inland settlements during the Indus period.

Conclusion

Markhan is an important archaeological site in Badin District associated with the urban phase of the Indus Valley Civilization. The available archaeological evidence suggests that it was a planned and organized settlement that formed part of the wider Indus cultural network. Although current knowledge of the site remains limited, its archaeological significance is undeniable. Future excavations and scientific research have the potential to provide valuable insights into the history and development of the Indus Civilization in southern Sindh and to enhance our understanding of ancient urbanism in the region.

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Mishaq

Abstract

Mishaq is an important archaeological site located in Dadu District, Sindh, Pakistan. Situated approximately 1.5 kilometers southeast of Shah Hasan on the western shore of Lake Manchar, the site is associated with the urban phase of the Indus Valley Civilization. Archaeological discoveries made at the site, including pottery, terracotta ornaments, flint tools, and carnelian beads, provide valuable evidence regarding the cultural and economic activities of its inhabitants. This article examines the geographical setting, archaeological discoveries, and historical significance of Mishaq within the broader context of the Indus Civilization.

Introduction

Mishaq is one of the significant archaeological sites of Sindh, situated in Dadu District approximately 1.5 kilometers southeast of Shah Hasan on the western bank of Lake Manchar. The

site belongs to the urban phase of the Indus Valley Civilization and provides important information regarding settlement patterns and cultural developments in the region. The discoveries made at Mishaq contribute to a better understanding of the spread and influence of the Indus Civilization across Sindh.

Geographical Setting

The location of Mishaq on the western shore of Lake Manchar placed it within a favorable environmental zone for human habitation. Lake Manchar, one of South Asia's largest natural freshwater lakes, has historically supported fishing, agriculture, transportation, and settlement activities. Access to water resources and fertile surroundings likely encouraged the establishment and growth of communities in this region.

The strategic position of the site suggests that its inhabitants benefited from the natural resources of the lake and may have participated in regional networks of communication and exchange.

Archaeological Discoveries

The noted archaeologist Nani Gopal Majumdar recovered several important artifacts from Mishaq, including:

- Coarse ware pottery
- Terracotta bangles
- Flint-edged tools
- Carnelian beads

These discoveries indicate that the inhabitants engaged in a variety of domestic, craft, and economic activities. The pottery reflects everyday household usage, while the flint tools demonstrate technological skills associated with tool production and subsistence practices.

Particularly significant are the carnelian beads, which are commonly found at major Indus Civilization centers such as Mohenjo-daro and Harappa. Their presence at Mishaq suggests participation in broader trade and exchange networks that linked settlements throughout the Indus region.

Relationship with the Indus Civilization

The material remains recovered from Mishaq clearly associate the site with the urban phase of the Indus Civilization. Urban settlements of the Indus world were characterized by standardized

pottery traditions, specialized crafts, trade activities, and organized social structures. The archaeological evidence from Mishaq reflects these cultural traits and indicates that the settlement was integrated into the wider Indus cultural sphere.

The discovery of carnelian beads is particularly important because such items were often produced through specialized manufacturing processes and circulated through regional and long-distance trade networks. This suggests that the inhabitants of Mishaq were connected to the economic systems that linked major and minor settlements across the civilization.

Historical Significance

Mishaq is historically significant because it provides evidence for the expansion of Indus Civilization settlements around the Lake Manchar region. The site demonstrates that urban cultural traditions extended beyond major centers and were also present in communities situated near important natural resources.

The archaeological record of Mishaq contributes to the study of settlement distribution, resource utilization, trade, and craft production in ancient Sindh. Furthermore, it offers insights into how

communities adapted to lacustrine environments and integrated local resources into broader economic systems.

Conclusion

Mishaq is an important archaeological site in Dadu District associated with the urban phase of the Indus Valley Civilization. Artifacts recovered by N. G. Majumdar, including coarse pottery, terracotta bangles, flint tools, and carnelian beads, highlight the site's cultural and economic significance. Its location near Lake Manchar underscores the importance of natural resources in the development of ancient settlements. Further archaeological investigation and scientific excavation may provide a deeper understanding of the site's role within the wider Indus Civilization and contribute significantly to the study of ancient urbanism in Sindh.

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Manda (Jammu)

Introduction

In the ancient history of South Asia, the Indus Valley Civilization (IVC) is recognized as one of the world's earliest urban civilizations, flourishing approximately between 2600 BCE and 1900 BCE. While major urban centers such as Mohenjo-daro, Harappa, Dholavira, and Rakhigarhi are widely known, the frontier and peripheral settlements of the civilization are equally significant because they provide crucial insights into the economic, political, and resource procurement systems of the Harappan world. One such important site is Manda Archaeological Site, located in the Akhnoor tehsil of Jammu district, on the right bank of the Chenab River. It is generally recognized as the **northernmost known outpost of the Indus Valley Civilization** within the Indian subcontinent.

The archaeological significance of Manda extends beyond the Harappan period, as the site presents evidence of **multi-period occupation**, ranging from the Early and Mature Harappan phases to the Early Historic period and subsequently the **Kushan period (1st–3rd century CE)**. Thus, Manda serves not only as evidence of the geographical expansion of the Indus Civilization but also as a critical source for understanding the cultural evolution, economic interactions, and historical developments of northern India.

Geographical Location and Environmental Context

Manda is situated in the Akhnoor tehsil of Jammu district in the Union Territory of Jammu and Kashmir, India, on the right bank of the Chenab River in the foothills of the Pir Panjal range. The site lies approximately **28 kilometers northwest of Jammu city**, making its geographical setting particularly strategic. The Chenab River, known in antiquity as *Chandrabhaga*, served as an important natural corridor connecting the Himalayan region with the plains of Punjab and Sindh.

Chenab River played a significant role in enhancing Manda's strategic and economic importance. Archaeologists suggest that the

Harappans may have established this settlement to procure **timber and other natural resources from the Himalayan forests**, which could then be transported downstream to major urban centers of the Indus Civilization.

Geographically, Manda occupied a frontier zone linking mountainous and plain regions. Such a location indicates that the settlement likely functioned not only as a habitation center but also as a **resource procurement, trade, and cultural exchange outpost**.

Environmentally, the region belongs to the **sub-Himalayan ecological zone**, characterized by semi-arid conditions combined with strong monsoonal influences. Summers are often extremely warm, while winters can be cold, particularly in nearby higher elevations. Seasonal rainfall contributes to the deposition of fertile alluvial soils along the riverbanks. The approximately **9.20-meter-thick cultural deposit** discovered at the site suggests long-term occupation and preservation through periodic sedimentation processes.

Discovery and Archaeological Survey of Manda

Manda first attracted systematic archaeological attention during the 1970s when the

Archaeological Survey of India (ASI) conducted surface investigations in the region. Pottery fragments collected from the surface, particularly **Harappan Red Ware**, immediately indicated the site's potential association with the Indus Valley Civilization.

Subsequently, organized excavations were undertaken in **1976–1977** under the supervision of archaeologist **J. P. Joshi**. The excavation revealed a **9.20-meter-thick occupational deposit**, divided into multiple cultural phases. These findings demonstrated that Manda was not merely a temporary settlement but rather a site of prolonged occupation spanning several historical periods.

Among the artifacts recovered were pottery vessels, copper pins, microlithic tools, terracotta figurines, bangles, and potsherds bearing **Indus script symbols**, all of which strongly indicate Manda's integration into the broader Harappan cultural sphere.

Nature and Methodology of Excavation

The excavation carried out in 1976–77 primarily followed the principles of **stratigraphic archaeology**, aimed at understanding the chronological sequence of cultural occupations.

Archaeologists employed vertical trench excavations to expose the successive occupational layers and establish a cultural timeline.

Due to the limited scale of excavation, a complete settlement layout could not be reconstructed. However, the evidence obtained confirmed the existence of permanent habitation, structural remains, and long-term cultural continuity. Archaeologists believe that substantial portions of the site remain buried, offering significant opportunities for future investigation through advanced technologies such as **Ground Penetrating Radar (GPR)** and geophysical survey methods.

Significance of Manda as the Northern Frontier of the Indus Civilization

The greatest significance of Manda lies in its identification as the **northernmost known settlement of the Indus Valley Civilization**. This challenges earlier assumptions that the Harappan world was restricted primarily to Sindh, Punjab, and Gujarat.

The discovery of Harappan pottery, seal fragments, and script-bearing potsherds at Manda confirms that its inhabitants maintained strong connections with the cultural traditions of the

Harappan core regions. At the same time, its relatively modest scale and adaptation to a hilly environment indicate that Manda functioned primarily as a **resource procurement outpost**, rather than a major urban center.

Its strategic position along the Chenab River suggests that timber, stone, and other valuable resources may have been transported from this frontier settlement to larger Harappan cities further south.

Manda Archaeological Site derives much of its archaeological importance from its **multi-period occupational sequence**, which presents the site not merely as a frontier Harappan outpost but as a settlement continuously inhabited across several historical phases. Excavations conducted during **1976–1977** revealed an occupational deposit approximately **9.20 meters thick**, reflecting long-term habitation, environmental changes, and cultural transformations. This deposit was broadly divided into three major cultural periods: the Harappan phase, the Early Historic phase, and the Kushan period.

Stratigraphy and Cultural Sequence

In archaeology, **stratigraphy** plays a crucial role in understanding the chronological order of human

occupation. At Manda, excavators identified clear cultural transitions within the depositional layers, reflecting shifts in settlement patterns, material culture, and social practices over time.

Period I: Early and Mature Harappan Occupation

The earliest occupational phase at Manda, designated as **Period I**, belongs to the Indus Valley Civilization. Archaeologists further divided this phase into **Sub-periods IA and IB**, where evidence of both Early Harappan traditions and Mature Harappan cultural elements appears.

This period yielded a substantial quantity of **Harappan Red Ware pottery**, including jars, bowls, dishes-on-stands, goblets, and storage vessels. Several ceramics displayed black-painted motifs, horizontal bands, and geometric decorations typical of Harappan artistic traditions.

A particularly significant aspect of this phase is that approximately **15–25 percent of the pottery assemblage exhibited pre-Harappan characteristics**, suggesting interaction between local traditions and expanding Harappan cultural practices. This mixture indicates that Manda may have functioned as a cultural interface between indigenous populations and the broader Harappan world.

Artifacts recovered from this phase include terracotta bangles, figurines, copper pins, chert blades, microlithic tools, and potsherds bearing **Indus script signs**, confirming strong integration into the symbolic and material culture of the Harappan civilization.

Harappan Pottery and Ceramic Traditions

The pottery assemblage recovered from Manda constitutes one of the most important categories of archaeological evidence for understanding the settlement's cultural identity. Archaeologists suggest that much of the pottery was manufactured from locally available alluvial clay derived from the banks of the Chenab River.

Like other settlements of the Indus Valley Civilization, Manda yielded several characteristic ceramic forms, including:

- Fine red ware pottery
- Black-painted decorative ceramics
- Large storage jars
- Bowls and dishes
- Dishes-on-stands

Some pottery fragments also contained **incised Indus script signs**, linking this northern settlement to the administrative and symbolic traditions of

the Harappan core regions. Although complete seals were absent, the discovery of an unfinished steatite seal fragment suggests local attempts at seal production or participation in Harappan trade and administrative systems.

Period II: Early Historic Phase and Painted Grey Ware Culture

Following the decline of the Harappan occupation, Manda entered a new cultural phase associated with the **Painted Grey Ware (PGW) tradition**, generally linked to northern India's Vedic and Iron Age societies.

The ceramics of this period were finer in texture and grey in color, often decorated with black painted geometric designs. Typical vessel forms included:

- Bowls
- Dishes
- Domestic serving vessels
- Storage containers

The presence of PGW pottery indicates that Manda was not abandoned after the collapse of the Indus Civilization. Instead, the settlement remained occupied and became integrated into emerging cultural networks of northern India. This

phase reflects broader social transformations, technological developments, and shifts in settlement organization.

Metal and Lithic Artifacts

Among the metal artifacts discovered at Manda, one of the most remarkable finds is a **copper double-spiral headed pin**, associated with the Harappan phase. Archaeologists note similarities between this object and certain West Asian artifacts, suggesting possible long-distance cultural interactions or indirect exchange networks.

Additional finds include:

- Bone arrowheads
- Chert blades and cutting tools
- Copper implements
- Terracotta bangles
- Decorative ornaments

These materials demonstrate that the inhabitants of Manda engaged in a variety of activities, including hunting, craft production, domestic work, and possibly regional trade.

Architectural Remains

Unlike major urban Harappan centers such as Mohenjo-daro or Harappa, Manda did not reveal evidence of monumental architecture. Nevertheless, excavations uncovered important traces of residential and structural activity.

The Harappan phase produced **stone wall remains and mud-brick foundations**, indicating permanent habitation. Evidence of repaired structures and reused building materials suggests long-term occupation and adaptation to local environmental conditions.

During later periods, especially the Kushan phase, excavators uncovered a **street approximately three meters wide** and partially preserved stone-built structures, reflecting a more organized settlement pattern. These findings indicate that Manda evolved through multiple occupational phases rather than functioning merely as a temporary frontier camp.

Historical Significance of Manda in the Indus Valley Civilization

Manda Archaeological Site occupies a uniquely important position in the study of the Indus Valley Civilization due to its identification as the **northernmost known Harappan settlement within the Indian subcontinent**. Its geographical

setting and archaeological assemblage provide important insights into the economic organization, frontier expansion, and resource procurement strategies of the Harappan civilization.

Archaeologists generally argue that Manda was established primarily to facilitate access to natural resources from the Himalayan foothills and adjoining forests. Its location near the foothills of the Pir Panjal Range would have enabled the procurement of timber and other valuable materials necessary for urban construction and economic activities in major Harappan cities.

The site's position along the Chenab River was equally significant. Rivers functioned as essential transportation corridors in antiquity, and the Chenab likely served as a channel for moving timber, stone, and other resources downstream toward the urban centers of the Harappan civilization. Consequently, Manda may be interpreted not merely as a residential settlement but as a **specialized frontier outpost dedicated to resource acquisition, trade, and regional interaction**.

The material remains discovered at Manda, including Harappan Red Ware, script-bearing pottery fragments, and seal-related artifacts,

demonstrate that the settlement remained culturally connected to the wider Harappan world despite its frontier location. At the same time, the modest scale of architecture and adaptation to a hilly environment distinguish Manda from the large urban centers of the Indus plains, highlighting regional flexibility within Harappan expansion.

Later Cultural Occupations and Social Transformations

One of the most important aspects of Manda is its evidence for **continuous or repeated occupation across several historical periods**, demonstrating cultural continuity and adaptation over time.

Painted Grey Ware Phase

After the decline of the Harappan civilization, Manda witnessed occupation associated with the **Painted Grey Ware (PGW) culture**, generally dated between approximately **1100 BCE and 600 BCE**. This phase is commonly linked with northern India's Vedic societies and the early Iron Age.

The pottery of this phase consists of fine grey ceramics decorated with black geometric designs. Bowls, dishes, and domestic serving vessels

became increasingly common, reflecting changing household practices and social organization.

The presence of PGW at Manda demonstrates that the site did not disappear following the collapse of the Indus Civilization. Instead, it remained integrated into broader regional developments occurring across northern India, illustrating an important process of cultural transition rather than abrupt abandonment.

Kushan Period (1st–3rd Century CE)

The upper occupational levels at Manda belong primarily to the **Kushan period**, during which the settlement appears to have experienced renewed activity. Excavations revealed:

- Stone-built architectural remains
- Planned streets and pathways
- Iron tools and weapons
- Copper coins
- Terracotta and glass ornaments
- Decorated ceramics with floral motifs

Kushan Empire was renowned for its extensive trade networks and connections with the Silk Road. Therefore, the discovery of Kushan-period artifacts at Manda suggests the settlement's

participation in regional exchange systems linking northern India with Central Asia.

However, archaeological evidence indicates that permanent occupation gradually declined after the **third century CE**, and the site eventually became largely abandoned, with only sporadic later disturbances and limited human activity.

Preservation and Current Challenges

Today, Manda Archaeological Site is recognized as a protected archaeological monument under the supervision of the **Archaeological Survey of India (ASI)**. Despite its protected status, the site faces several conservation challenges.

Its location on the bank of the Chenab River makes it vulnerable to **riverbank erosion**, which threatens the integrity of archaeological deposits. Additional risks include:

- Unregulated human interference
- Urban expansion in nearby areas
- Illegal artifact collection
- Dense vegetation growth covering archaeological remains

Since the excavations of 1976–77, no major excavation campaigns have been undertaken,

leaving much of the site unexplored beneath alluvial deposits.

Potential for Future Archaeological Research

Manda possesses immense potential for future archaeological research. Modern scientific methods such as:

- Ground Penetrating Radar (GPR)
- Geographic Information Systems (GIS) mapping
- Paleoenvironmental reconstruction
- Residue and material analysis
- Ancient DNA studies

could provide new insights into settlement organization, subsistence patterns, trade, environmental adaptation, and population history.

Comparative research between Manda and frontier Harappan settlements such as Shortugai may also help scholars better understand Harappan expansion, economic specialization, and interactions across distant ecological zones.

Furthermore, renewed excavations may clarify unresolved questions regarding the precise relationship between local pre-Harappan

traditions and Harappan settlement strategies in northern frontier regions.

Conclusion

Manda (Jammu) represents one of the most significant frontier settlements of the Indus Valley Civilization and serves as a key archaeological site for understanding Harappan geographical expansion, economic organization, and cultural continuity. Situated on the banks of the Chenab River, the site illustrates how Harappan communities extended their influence beyond core urban regions into mountainous frontier zones for the procurement of valuable natural resources.

The multi-period occupational sequence at Manda, extending from the Harappan era through the Painted Grey Ware phase and into the Kushan period, establishes the site as an important example of long-term settlement continuity and cultural transformation. Pottery, metal artifacts, architectural remains, and script-bearing objects collectively demonstrate Manda's strong integration into the material and symbolic systems of the wider Harappan world.

Although the 1976–77 excavations provided a valuable foundation for scholarly understanding,

large portions of the site remain unexplored. Future interdisciplinary research employing modern scientific techniques has the potential to significantly deepen our understanding not only of Manda itself but also of broader patterns of settlement, trade, and adaptation within the northern frontier of the Indus Valley Civilization.

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Malwan

Malwan (also spelled *Malvan*) is a small archaeological site of the Indus Valley Civilization located in the Surat District of the Indian state of Gujarat. The site is of particular importance because many scholars consider it one of the southernmost limits of the Indus Civilization. It provides valuable evidence for understanding the geographical expansion, trade networks, and cultural influence of the Harappan Civilization in coastal and southern regions.

The Indus Valley Civilization was one of the world's earliest urban civilizations, flourishing approximately between 3300 BCE and 1300 BCE. While major urban centers such as Mohenjo-daro and Harappa are well known, smaller peripheral settlements are equally important for understanding the civilization’s broader geographical reach. Malwan is one such site that provides crucial evidence of Harappan influence in southern Gujarat.

Geographically, Malwan was situated near important riverine and coastal communication routes, making it potentially significant in regional trade and cultural interaction. Comparisons with other Harappan sites in Gujarat, including Lothal, Dholavira, and Kuntasi, suggest that this region played an important role in maritime commerce and the exchange of resources. The location of Malwan indicates that Harappan communities were not confined to major cities but also established smaller settlements and trading outposts.

Some scholars regard Malwan as one of the southernmost boundaries of the Indus Civilization, while Daimabad is often considered an even more southerly extension. Together, these sites demonstrate that the cultural influence of the Indus Civilization extended far beyond Sindh and Punjab into western and southern India.

Archaeological evidence further suggests that Malwan continued to be occupied during the Late Harappan and Post-Harappan periods. This continuity provides important insights into cultural transformation and adaptation following the decline of the major urban centers of the Indus Civilization.

The study of Malwan contributes not only to archaeology but also to broader discussions of human settlement patterns, animal husbandry, metallurgy, and regional trade networks. Artifacts such as copper and bronze objects, beads, terracotta figurines, and pottery offer valuable information about the daily lives of its inhabitants.

The archaeological significance of Malwan is primarily based on excavations and the material remains recovered from the site. Although smaller than the major Harappan cities, the discoveries clearly demonstrate strong cultural connections with the Indus Civilization.

Discovery and Excavation

The site was discovered in 1967 by the archaeologists F. R. Allchin and J. P. Joshi. By the time of its discovery, however, a substantial portion of the ancient settlement had already been damaged or destroyed.

Systematic excavations were conducted by the Archaeological Survey of India (ASI) during 1967–68 and again in 1970. The excavations also involved Cyrus Guzder, giving the project broader academic significance. These investigations revealed evidence of multiple occupational phases.

Cultural Periods

Archaeologists divided the occupation of Malwan into two principal periods:

Period I: Late Harappan and Post-Harappan

This phase belongs to the final stages of the Indus Civilization, commonly known as the Late Harappan Period. Despite the decline of major urban centers, smaller settlements such as Malwan continued to flourish. Pottery, metal objects, and other artifacts recovered from the site belong primarily to this phase.

The Post-Harappan phase demonstrates that although the urban system of the Indus Civilization had weakened, several cultural traditions persisted. Pottery styles and decorative motifs continued to reflect Harappan influences while also displaying local innovations.

Period II: Historical Pits and Temporary Occupation

The second phase is represented by historical-period pits and evidence of temporary occupation. These remains indicate that the site was reused in later times but did not function as a permanent urban settlement. This phase reflects

changing social and economic conditions in the region.

Metal Artifacts and Craftsmanship

Several copper and bronze objects were discovered at Malwan, demonstrating the technological capabilities of its inhabitants. Among the recovered artifacts were:

- A copper or bronze bangle
- Small metal rods

These finds indicate knowledge of metallurgy and the use of metal objects for both practical and ornamental purposes, a characteristic feature of Harappan material culture.

Animal Remains and Subsistence

Animal bones recovered from the site provide important information about the economy and dietary practices of the inhabitants. Identified species include:

- Sheep
- Goat
- Cattle
- Dog
- Horse

- Pig
- Barasingha (swamp deer)
- Fish

These remains suggest a mixed economy based on agriculture, animal husbandry, fishing, and hunting. The presence of fish indicates the exploitation of aquatic resources, while wild animal remains point to occasional hunting activities.

Terracotta Objects and Pottery

Excavations yielded terracotta humped bull figurines, which may have held economic, symbolic, or religious significance. Similar objects are frequently found at Harappan sites and are often interpreted as toys, ritual objects, or symbolic representations of cattle.

Circular or bun-shaped terracotta cakes were also discovered. Their precise function remains uncertain, although scholars have suggested domestic, industrial, or ritual uses.

Various types of pottery, including bowls and jars of different sizes, were recovered. Decorative motifs included plain bands and hanging interlaced loop designs on the neck and body of vessels. These stylistic features reflect a

combination of Late Harappan artistic traditions and local cultural developments.

Beads and Trade

Carnelian beads recovered from Malwan provide evidence of participation in regional trade networks. Carnelian was a valued semi-precious stone widely used throughout the Indus Civilization. The presence of such beads suggests that Malwan was connected to broader exchange systems and may have played a role in Gujarat's trade networks.

Cultural Significance

Malwan is one of the smaller but academically significant sites of the Indus Civilization. It contributes substantially to our understanding of cultural expansion and regional adaptation during the Late Harappan period.

Although Malwan was not as large or as urbanized as major centers such as Mohenjo-daro and Harappa, the artifacts discovered there demonstrate that Harappan cultural traditions extended deep into southern Gujarat.

Its importance is further enhanced by its location near what many scholars consider the southern

frontier of the Indus Civilization. Together with Daimabad, Malwan illustrates the extensive geographical reach of Harappan cultural influence.

Relationship with the Indus Civilization

The pottery, copper and bronze artifacts, carnelian beads, and terracotta figurines found at Malwan closely resemble material culture from other Harappan sites. Decorative pottery styles, in particular, demonstrate continuity with Late Harappan traditions.

The discovery of carnelian beads suggests participation in regional and possibly long-distance trade networks. Gujarat played a crucial role in maritime commerce during the Harappan period, and Malwan may have functioned as a local center connected to these wider economic systems.

Animal remains indicate an economy based on farming, herding, fishing, and hunting, reflecting subsistence practices similar to those observed at many other Harappan settlements.

Comparative Analysis

A comparison between Malwan and other Harappan sites in Gujarat reveals both similarities and differences.

Lothal was a major port settlement with extensive evidence of maritime trade, whereas Malwan appears to have been a smaller settlement serving local needs. Nevertheless, similarities in pottery and bead production indicate cultural connections.

Dholavira was a highly organized urban center featuring sophisticated water-management systems, planned architecture, and fortifications. In contrast, Malwan appears to have been a more modest settlement. This contrast illustrates the diversity of settlement types within the Indus Civilization.

Similarly, comparison with Kuntasi suggests that coastal and semi-coastal Gujarat formed an important network of Harappan communities linked by trade, resource exchange, and cultural interaction.

Archaeological Limitations

One of the principal challenges in studying Malwan is the extensive damage suffered by the site before archaeological investigation began.

Much of the ancient settlement had already been destroyed by the time of its discovery in 1967. As a result, valuable information concerning settlement layout, architecture, and economic organization has been permanently lost.

Despite these limitations, the surviving archaeological evidence remains highly valuable for understanding Late Harappan occupation in southern Gujarat.

Conclusion

Malwan is a small but significant archaeological site that enhances our understanding of the geographical expansion, cultural continuity, and regional diversity of the Indus Valley Civilization. The pottery, metal artifacts, beads, terracotta objects, and faunal remains recovered from the site demonstrate that its inhabitants maintained strong connections with Harappan cultural traditions while adapting to local environmental and social conditions.

The site also provides important evidence that the decline of the Indus Civilization was not an abrupt collapse but rather a gradual process involving cultural transformation and continuity in many regions. Consequently, sites such as Malwan are

essential for reconstructing the complex history of ancient South Asia.

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Mandi (Uttar Pradesh)

Introduction

The Indus Valley Civilization is regarded as one of the world's earliest urban civilizations, flourishing approximately between 3300 BCE and 1300 BCE across extensive regions of present-day Pakistan and northwestern India. The civilization is not only known for its major urban centers such as Mohenjo-daro, Harappa, Dholavira, and Rakhigarhi, but also for smaller archaeological sites and hidden treasure discoveries that provide valuable insights into the civilization's social, economic, and cultural organization.

Among these significant discoveries is the **Mandi Treasure**, also known as the **Mandy Hoard**, which came to light in 2000 in the village of Mandi, located in the Muzaffarnagar district of Uttar Pradesh, India. This discovery was particularly extraordinary because it emerged unexpectedly through villagers rather than through systematic

archaeological excavation. Subsequently, it became the subject of extensive looting, administrative confusion, and irreparable cultural loss. Nevertheless, archaeological experts associated the treasure with the **Late Harappan Period**, making it an important source for understanding the geographical spread and cultural interactions of the Indus Civilization.

Geographical and Regional Background of Mandi

Mandi is a small village situated in the Muzaffarnagar district of Uttar Pradesh, approximately 200 kilometers northeast of Delhi. The region is primarily known for its agricultural productivity, particularly sugarcane cultivation. Geographically, Mandi lies within the fertile Ganga–Yamuna Doab region, an area historically suitable for human settlement and agricultural activity.

The significance of Mandi extends beyond its agricultural identity. From an archaeological perspective, it may represent evidence of cultural interaction beyond the traditionally recognized geographical boundaries of the Indus Civilization. Since archaeological remains linked to the Indus Civilization are relatively rare in Uttar Pradesh, the discovery of Mandi attracted considerable

scholarly attention. It suggested that Harappan cultural or commercial influences may have reached farther into northern India than previously assumed.

The Treasure Discovery of 2000: An Accidental Revelation

In June 2000, an ancient treasure was unexpectedly discovered in a mound located on the outskirts of Mandi village. The mound occupied approximately 500 square meters of land owned by a local farmer named **Anil Kumar**, who intended to level the area for sugarcane cultivation. He allowed villagers to remove soil from the mound for personal use.

By chance, three village women uncovered a **copper urn** filled with gold ornaments while scraping soil from the mound. Following the discovery, a dispute emerged among the women over ownership of the treasure, and news of the find quickly spread throughout the village. Soon, many villagers began excavating the site in search of additional valuables.

According to various eyewitness accounts, more urns containing gold bracelets, necklaces, ornaments, and valuable metallic objects were

discovered. Unofficial estimates suggest that villagers may have uncovered nearly **500 kilograms of gold ornaments and treasure**, whereas official government records documented only a much smaller quantity, approximately 10 kilograms.

The incident is widely regarded as a tragic example in archaeological history, where the absence of systematic scientific excavation resulted in immense cultural destruction. Many ornaments were reportedly sold to local traders and melted down, permanently erasing their archaeological identity and context.

Archaeological Significance of the "Mandy Hoard"

After examining the surviving ornaments and associated materials, experts from the **Archaeological Survey of India (ASI)** and the Uttar Pradesh Department of Archaeology concluded that the treasure belonged to the **Late Harappan Period**.

The craftsmanship, stylistic features, and artistic design of the ornaments exhibited remarkable similarities with jewelry recovered from several major Indus Civilization sites, including:

- Harappa
- Mohenjo-daro
- Lothal
- Rakhigarhi
- Dholavira

These similarities raise the possibility that Mandi was either connected to Harappan trade networks or was influenced by Late Harappan cultural traditions. Some archaeologists suggest that the treasure may have belonged to an elite individual or a socially prominent household and was buried during a period of migration, political instability, or social crisis.

Mandi and the Debate on the Geographical Extent of the Indus Civilization

The discovery of the Mandi treasure generated an important academic question: **Were the boundaries of the Indus Civilization more extensive than traditionally assumed?**

Conventionally, the Indus Civilization has been associated primarily with present-day Pakistan, Gujarat, Rajasthan, Punjab, Haryana, and western regions of northern India. However, discoveries such as Mandi suggest that Harappan cultural and

economic influence may have extended much farther east.

Some scholars classify Mandi as part of a **Peripheral Harappan Influence Zone**, representing regions indirectly influenced by Harappan traditions. Others interpret it as evidence of a trade hoard linked to long-distance exchange networks.

Material Culture of the Mandi Hoard

In archaeology, **material culture** refers to physical objects that provide insight into the economic activities, technological skills, social organization, religious beliefs, and symbolic systems of past societies. The Mandi discovery is particularly significant in this regard, as the recovered artifacts offer important clues about the cultural and technological milieu of the Late Harappan phase.

The hoard discovered in June 2000 consisted primarily of gold ornaments, including bracelets, necklaces, decorative items, and valuables stored inside copper urns. Although a large portion of the material was looted and melted down before proper documentation, the surviving objects studied by archaeologists reveal important patterns regarding craftsmanship and cultural identity.

Scholars suggest that the Mandi hoard was not a random domestic accumulation but rather a deliberately stored collection, possibly associated with:

1. Wealth belonging to an elite or ruling group
2. Ritual or ceremonial deposits
3. Trade-related storage
4. Emergency burial during crisis conditions

Similar hoard deposits have been documented at several Late Harappan sites, often interpreted as evidence of social disruption, migration, or political instability during the final phases of the Indus Civilization.

Technological and Artistic Analysis of the Ornaments

The ornaments recovered from Mandi demonstrate a high level of metallurgical and artistic skill. Even though only a limited portion of the original assemblage survived, the available evidence indicates advanced techniques of metalworking, including melting, shaping, polishing, and intricate design work.

1. Metallurgical Expertise

The Late Harappan craftsmen possessed significant knowledge of metal refinement and ornament production. The gold jewelry from Mandi indicates:

- A sophisticated understanding of metal purification techniques
- Production of complex ornamental forms
- Aesthetic design closely linked with social identity

Comparable metallurgical traditions are well documented in earlier Harappan urban centers such as Harappa and Mohenjo-daro.

2. Ornamentation and Social Identity

The presence of large quantities of bracelets and necklaces suggests that jewelry in Harappan society was not merely decorative but also symbolic. In the Indus cultural context, ornaments often reflected:

- Social hierarchy
- Economic status
- Kinship or group identity
- Ritual or ceremonial roles

The composition of the Mandi hoard suggests that its owner likely belonged to a wealthy household or elite social stratum.

Copper Urns and Storage Traditions

The discovery of **copper urns** associated with the treasure is of particular archaeological importance. In Harappan contexts, containers were often used for storing valuable materials and ritual goods.

Copper urns may have served multiple functions:

- Secure storage of precious ornaments
- Ritual or votive deposits
- Temporary storage of trade goods
- Concealment of wealth during periods of insecurity

A key unresolved question is whether these urns were locally produced or imported from other Harappan regions. If imported, they would indicate strong trade or cultural connections between Mandi and major Indus centers.

Mandi and Harappan Trade Networks

One of the defining features of the Late Harappan period was the continuation of **long-distance**

trade networks, although in a more fragmented form compared to the Mature Harappan phase. Goods such as metals, beads, semi-precious stones, and ornaments circulated across wide geographical regions.

Given its location in the Ganga–Yamuna Doab, Mandi may have functioned as:

- A peripheral trade node
- A contact zone between Harappan and non-Harappan populations
- A frontier settlement influenced by Harappan culture
- A temporary storage or redistribution point for goods

The stylistic parallels between Mandi ornaments and those from Lothal, Dholavira, and Rakhigarhi further support the possibility of sustained interregional exchange.

Cultural Interaction and Possible Migration

Some scholars argue that the Mandi hoard may not only represent trade activity but also reflect **population movement during the Late Harappan phase**. Following the decline of major urban centers around 1900 BCE:

- Urban settlements began to fragment
- Populations migrated toward smaller rural settlements
- New regions were gradually occupied
- Cultural traditions diffused into new ecological zones

In this context, Mandi could represent a settlement founded or influenced by Late Harappan populations moving eastward.

Loss of Archaeological Context

A major limitation in interpreting the Mandi discovery is the destruction of archaeological context due to uncontrolled excavation and looting. In archaeology, contextual information is essential for understanding:

- The spatial arrangement of artifacts
- Burial or depositional patterns
- Stratigraphic layers
- Associated cultural materials

Because the hoard was removed without scientific excavation, much of this crucial information has been permanently lost, significantly limiting scholarly interpretation.

Archaeological Interpretation of the Mandi Hoard

The Mandi (Mandy Hoard) discovery is widely regarded as a complex archaeological case, primarily because it was not recovered through systematic excavation but rather through accidental exposure followed by uncontrolled looting. As a result, the absence of stratigraphic documentation severely limits the certainty of its interpretation. Nevertheless, based on the surviving artifacts and comparative analysis, several interpretative models have been proposed.

1. Trade Hoard Hypothesis

One of the most widely discussed interpretations is that the Mandi assemblage represents a **trade hoard**. During the Late Harappan phase, long-distance exchange networks continued to operate, albeit in a more decentralized form compared to the Mature Harappan period. Precious metals, beads, and ornaments were frequently transported across regions for commercial exchange.

The geographic position of Mandi in the Ganga–Yamuna Doab suggests that it could have

functioned as a node within inland exchange routes connecting Harappan cultural zones with northern and eastern India.

This hypothesis is supported by stylistic parallels with artifacts from Harappa, Mohenjo-daro, Lothal, and Dholavira.

2. Elite Wealth or Domestic Treasure Hypothesis

Another interpretation suggests that the hoard belonged to a wealthy individual, elite household, or socially prominent group. The large quantity of gold ornaments indicates considerable accumulated wealth, inconsistent with ordinary domestic storage.

Although the Indus Civilization is often characterized as relatively egalitarian, discoveries such as Mandi indicate increasing social differentiation during its later phases.

3. Crisis Burial Hypothesis

A third and widely accepted explanation is that the hoard was buried during a period of crisis. The Late Harappan phase is marked by:

- Decline of urban centers
- Disruption of trade networks

- Environmental and climatic changes
- Shifting river systems
- Population dispersal into rural settlements

In such conditions, burying valuables for safekeeping would have been a rational response. The failure of recovery could explain why the hoard remained buried for millennia.

Mandi and the Decline of the Indus Civilization

The Mandi hoard is generally attributed to the Late Harappan phase, which represents the final stage of the Indus Civilization. After approximately 1900 BCE, major urban centers gradually declined, and population patterns shifted significantly.

Some scholars interpret Mandi as part of the **post-urban dispersal phase**, during which Harappan cultural traditions persisted in smaller settlements rather than large cities.

Within this framework, Mandi may represent:

- A survival of Harappan cultural traditions in peripheral zones
- Evidence of eastward cultural expansion
- A settlement influenced by migrating Harappan populations

Thus, the site contributes to broader debates regarding the transformation rather than abrupt collapse of the Indus Civilization.

Scholarly Criticism and Methodological Challenges

Despite its importance, the Mandi discovery raises several unresolved scholarly issues:

1. Disputed quantity of treasure
Official estimates differ significantly from local accounts, making it difficult to determine the actual scale of the hoard.

2. Lack of systematic excavation
Because the site was not excavated scientifically, essential archaeological data such as stratigraphy and spatial organization is missing.

3. Chronological uncertainty
Although the ornaments are attributed to the Late Harappan period, precise dating remains uncertain due to the absence of associated contextual materials.

4. Unclear site function
It remains unresolved whether Mandi was a permanent settlement, a trade station, or merely a burial location for hidden wealth.

Importance for Archaeological Heritage Management

The Mandi case underscores the critical importance of heritage protection. Had the site been properly excavated, it could have provided valuable insights into:

- The eastern extent of Harappan cultural influence
- Social stratification in the Late Harappan period
- Trade and exchange mechanisms
- Technological traditions of ornament production

Instead, uncontrolled excavation led to irreversible loss of cultural and scientific information.

Conclusion

The Mandi (Mandy Hoard) represents a significant yet fragmentary archaeological discovery associated with the Late Harappan phase of the Indus Valley Civilization. Although much of the material was lost due to looting and melting, the surviving evidence suggests strong cultural affinities with established Harappan centers.

The ornament styles, copper urns, and comparative parallels with major Indus sites indicate that Mandi was likely connected to broader Harappan cultural and economic networks. Whether through trade, migration, or cultural diffusion, the site reflects the continued influence of Harappan traditions in the eastern Gangetic region.

Ultimately, the Mandi discovery is not only an archaeological artifact but also a critical case study in heritage preservation, highlighting both the potential and vulnerability of South Asia's ancient cultural landscapes.

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Mehrgarh

Introduction

Mehrgarh is one of the earliest archaeological sites in South Asia and holds exceptional importance for understanding the origins of human civilization, agriculture, and settled life. Located in the Kacchi Plain of Balochistan near the Bolan Pass, the site is widely regarded as a precursor to the Indus Valley Civilization. Archaeological evidence indicates that Mehrgarh was occupied approximately between 5200 BCE and 2000 BCE, during which human societies gradually transitioned from hunting and food gathering to agriculture and pastoralism.

The significance of Mehrgarh lies not only in its antiquity but also in the remarkable evidence it provides regarding early human social development. Archaeological discoveries include agriculture, animal domestication, mud-brick architecture, grain storage systems, bead-making industries, early dental treatment practices, and signs of organized social structures. Consequently,

Mehrgarh occupies a central position not only in the history of Pakistan but also in the broader narrative of human civilization.

Geographical Setting and Natural Environment

Mehrgarh is situated in the province of Balochistan, Pakistan, approximately 30 kilometers west of the town of Sibi. The site lies on the western bank of the Bolan River in the Kacchi Plain, at the foothills of the Sulaiman mountain ranges. Geographically, the location was of immense importance because the Bolan Pass served as a natural route connecting Balochistan, the Iranian Plateau, Central Asia, and the Indus Valley.

During ancient times, the region's climate appears to have been relatively wetter than today, creating favorable conditions for early farming. Studies of pollen, soil, and environmental remains indicate the presence of vegetation and ecological conditions suitable for permanent settlement and agriculture. Seasonal rainfall and the flow of the Bolan River likely contributed to fertile land where crops such as wheat and barley could be cultivated.

Geographically, Mehrgarh occupied a strategic position between mountainous and lowland

regions, enabling cultural exchange, trade, and technological diffusion. For this reason, many scholars consider Mehrgarh a “cultural crossroads” where different ecological and cultural traditions interacted.

Discovery of Mehrgarh

Mehrgarh was formally discovered in 1974 by the French archaeological mission led by Jean-François Jarrige and Catherine Jarrige. During surveys conducted in the Kacchi Plain of Balochistan, the site was identified and subsequently excavated.

Early excavations uncovered mud-brick houses, storage facilities, human burials, animal bones, and evidence of agricultural life, revealing that Mehrgarh was not merely a temporary encampment but a structured and organized village community.

Archaeological excavations continued through eleven seasons between 1974 and 1985 and resumed again from 1997 to 2000. These investigations revealed successive cultural phases, demonstrating the continuous development and long-term occupation of the site.

Archaeological Structure of the Site

Mehrgarh consists of several low mounds, designated MR.1 to MR.6. Among these, MR.3 is particularly significant because it contains much of the evidence for the earliest occupation.

The site extends across approximately 250 hectares and reflects thousands of years of continuous habitation. Excavations indicate that the inhabitants constructed multi-room houses using mud bricks. In the earliest phases, streets were not clearly defined, suggesting a closely connected communal lifestyle.

Large storage facilities for grain were also discovered, indicating organized food production, surplus storage, and collective management of resources.

Period I: The Aceramic Neolithic Phase

The earliest phase of Mehrgarh is identified as the "Aceramic Neolithic" because pottery had not yet become widespread. During this period, people constructed mud-brick houses but relied on baskets, leather containers, and wooden or stone tools for everyday activities.

During this period, the inhabitants:

- Began cultivating wheat and barley;

- Started domesticating goats, sheep, and cattle;
- Built storage systems for grain;
- Produced tools from stone and bone;
- Created ornaments from shells, turquoise, and lapis lazuli.

One of the most extraordinary discoveries at Mehrgarh is evidence of dental treatment dating to around 5000 BCE. Archaeologists found drilled human molars, which are considered among the earliest known examples of dental intervention in human history.

The Beginning of Social and Economic Life

The early society of Mehrgarh was primarily based on agriculture and animal husbandry. People lived in small villages and practiced a cooperative way of life. Hunting continued alongside farming, suggesting that economic transformation occurred gradually rather than abruptly.

Social organization appears to have been relatively egalitarian, as there is little variation in house size. However, differences in burial goods indicate the possible emergence of early social distinctions.

The Ceramic Neolithic Phase (Periods II–III)

The second and third phases of Mehrgarh's history are generally classified as the "Ceramic Neolithic," spanning approximately from 4650 BCE to 3500 BCE. This period is of exceptional significance in the trajectory of human civilization because it witnessed the invention and widespread use of pottery, which brought fundamental transformations to social and economic life.

In earlier periods, inhabitants relied primarily on baskets and mud-lined storage facilities for preserving food and water. During the Ceramic Neolithic, however, fired clay vessels, bowls, jars, and storage containers became increasingly common. Many of these pottery objects were decorated with geometric patterns, lines, and simple artistic motifs, reflecting an emerging sense of craftsmanship and aesthetic expression.

Over time, pottery production became more refined, and painted ceramics in black, red, and brown designs began to appear. This technological development not only improved everyday domestic life but also enhanced food preservation, storage, and exchange systems.

Agricultural Development and Food Production

During this phase, agriculture became increasingly systematic and organized. In addition to wheat and barley, evidence suggests the cultivation of additional crops and fruit-bearing plants. Archaeological findings indicate that the inhabitants:

- Cultivated wheat and barley on a larger scale;
- Used dates and certain pulses as food resources;
- Expanded animal domestication, especially cattle, sheep, and goats;
- Constructed granaries for the storage of surplus grain.

These developments suggest that the society of Mehrgarh had progressed beyond subsistence farming and had begun producing agricultural surplus—an essential foundation for social organization and economic complexity.

Animal husbandry also became more structured. Cattle, especially zebu-type humped cattle, along with sheep and goats, played an increasingly important role in providing meat, milk, and possibly labor for agricultural work. Hunting remained part of daily subsistence but gradually declined in relative importance.

Architecture and Settlement Patterns

The Ceramic Neolithic period witnessed remarkable advancements in architecture. Multi-room mud-brick houses became increasingly common, and some structures included central courtyards or communal spaces.

The architectural layout suggests:

- Permanent family residences;
- Dedicated storage areas for food and grain;
- Strong communal and neighborhood relationships.

Large storage buildings, likely used as granaries, indicate organized systems of food management and collective economic planning. These developments suggest the emergence of increasingly coordinated forms of social organization.

Craft Production, Industry, and Trade

Mehrgarh evolved during this period from a purely agricultural settlement into an important center of craft specialization and artisanal production.

Bead-Making and Ornamentation

Archaeologists discovered numerous ornaments and decorative objects at Mehrgarh, including:

- Shell necklaces;
- Turquoise beads;
- Lapis lazuli ornaments;
- Stone and bone jewelry.

The presence of such materials demonstrates that the inhabitants maintained long-distance trade connections with distant regions, particularly Afghanistan, Iran, and coastal areas.

Early Use of Cotton

Mehrgarh has also yielded some of the earliest evidence of cotton use in the world. Archaeological remains suggest that inhabitants may have begun experimenting with cotton fibers for thread production and possibly textile manufacture. This represents a major milestone in the economic and technological history of humanity.

The Beginnings of Metallurgy

Toward the later stages of this period, evidence of copper usage begins to appear. Small copper beads and simple tools indicate an important

transitional phase between the Stone Age and the emerging Metal Age.

Religious Ideas and Symbolic Expression

Terracotta figurines, particularly female figurines, have been recovered from Mehrgarh and are often interpreted by scholars as symbolic representations associated with fertility or a possible “Mother Goddess” tradition.

These figurines may have been connected with:

- Agricultural fertility;
- Childbirth and family continuity;
- Ritualistic or symbolic practices.

Animal figurines, especially representations of cattle and goats, were also common and likely reflected the economic and symbolic importance of domesticated animals in daily life.

Burial Practices and Social Organization

Burial customs during this period reveal increasingly sophisticated funerary traditions. Men, women, and children were buried separately, and many graves contained:

- Ornaments;

- Pottery vessels;
- Animal remains;
- Everyday utilitarian objects.

These practices suggest that the inhabitants possessed beliefs concerning life after death or spiritual continuity.

Differences in grave goods may also indicate the early emergence of social stratification, as some individuals were buried with more valuable possessions than others.

The Chalcolithic Phase (Copper-Stone Age)

The fourth through eighth phases of Mehrgarh's history are collectively referred to as the "Chalcolithic Period," extending approximately from 3500 BCE to 2000 BCE. This phase is distinguished by the simultaneous use of stone and metal technologies, during which society became increasingly organized, technologically sophisticated, and economically complex.

During this period, Mehrgarh experienced substantial changes in settlement structure, craft production, trade, and social organization. Population growth led to the expansion of settlements, the construction of multi-room houses, communal storage facilities, and

designated areas for production and economic activity.

Development of Metallurgy

During the Chalcolithic period, the use of copper advanced considerably. Archaeological excavations have revealed:

- Copper beads;
- Needles and tools;
- Crucibles used for smelting metal;
- Evidence of copper-working activities.

These findings demonstrate a growing mastery of metallurgy and technological innovation. Researchers argue that these developments later contributed to the advanced metallurgical traditions found in major Indus urban centers such as Mohenjo-daro and Harappa.

Pottery and Artistic Development

The Chalcolithic period witnessed major advancements in ceramic production. Pottery became:

- More refined;
- Better finished;

- Decorated with geometric and artistic motifs.

Painted pottery featuring black designs on red surfaces became increasingly common. Animal motifs, plant-inspired patterns, and abstract geometric forms illustrate an expanding artistic consciousness and symbolic expression.

This period also shows early evidence of the use of the potter's wheel, which enabled more symmetrical, durable, and standardized ceramic vessels.

Social Organization and Economic Complexity

In the later phases of Mehrgarh, society appears significantly more organized and socially differentiated. Archaeological evidence suggests:

- Systems of communal grain storage;
- Specialized craft production;
- Long-distance trade relations;
- Emerging forms of social differentiation.

The presence of materials such as lapis lazuli, turquoise, shells, and other valuable resources demonstrates that Mehrgarh maintained commercial relations with regions such as Afghanistan, Iran, and coastal areas.

These trade networks contributed not only to economic prosperity but also to the diffusion of cultural ideas, artistic styles, and technological innovations.

Mehrgarh and the Indus Valley Civilization

Mehrgarh is widely regarded as one of the earliest foundations—or cultural precursors—of the Indus Valley Civilization. Many characteristics that later became prominent in urban Indus centers can be traced to their earlier forms at Mehrgarh.

These include:

1. Agricultural Economy

The cultivation of wheat and barley, as well as organized animal husbandry, later evolved into more sophisticated agricultural systems in the cities of the Indus Civilization.

2. Architecture

The tradition of mud-brick construction, storage buildings, and organized settlement planning established at Mehrgarh continued into later Indus urbanism.

3. Industry and Trade

Bead-making, textile production, copper-working, and long-distance trade all became defining features of the Mature Indus Civilization.

4. Social Organization

Collective resource management, occupational specialization, and organized production systems at Mehrgarh laid important foundations for later urban administration.

In this sense, Mehrgarh may be understood as a "cultural laboratory" in which the early social, technological, and economic foundations of the Indus Civilization were gradually formed.

The Decline of Mehrgarh

After approximately 2600 BCE, Mehrgarh gradually declined in importance, and by around 2000 BCE, the settlement had largely been abandoned.

Scholars propose several possible explanations for this decline:

- Climatic change and increasing aridity;
- Changes in river systems and environmental conditions;

- Population movement toward more developed urban centers;
- Shifting trade routes and economic priorities.

Many researchers believe that inhabitants of Mehrgarh gradually relocated to nearby settlements or became integrated into emerging urban centers of the Indus Valley Civilization.

Archaeological and Historical Significance

UNESCO has included Mehrgarh on its Tentative List for World Heritage recognition due to its exceptional archaeological significance.

Research at Mehrgarh demonstrates that South Asia witnessed the early emergence of:

- Agriculture;
- Permanent settlements;
- Organized social systems;
- Craft industries and technological innovation;
- Early medical practices, especially dentistry.

The site also strengthens the argument that the Indus Valley Civilization did not emerge suddenly but developed gradually over thousands of years

through social, technological, and cultural evolution.

Conclusion

Mehrgarh is among the oldest and most significant archaeological sites in South Asia, providing critical evidence for the origins of settled life, agriculture, animal domestication, technological innovation, and social organization. The site clearly demonstrates that the roots of the great Indus Valley Civilization extend deep into the Neolithic period.

The study of Mehrgarh reveals that civilization is not an abrupt phenomenon but the outcome of generations of experimentation, adaptation, environmental interaction, and collective social effort. In this regard, Mehrgarh stands not merely as an archaeological site but as a living chapter in the evolutionary history of human civilization.

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Mitathal

Introduction

Mitathal is an important archaeological site located in the Bhiwani district of Haryana, India, renowned for its association with the Indus Valley Civilization. The site is particularly linked with the Mature Harappan Period and the Late Harappan Period, although evidence of Pre-Harappan cultural phases has also been discovered. Mitathal is considered one of the important eastern extensions of the Harappan Civilization, where signs of urban life, craft production, trade networks, and social transformations have been preserved.

In the study of the Indus Valley Civilization, Mitathal holds considerable significance because it helps scholars understand that the urban and cultural influence of the Harappan Civilization was not confined merely to Sindh and Punjab but extended into the northern plains of India. Archaeological excavations indicate that the inhabitants of Mitathal were not solely dependent

on agriculture; rather, handicrafts, pottery production, metallurgy, and trade also constituted important aspects of their economy.

Spreading across approximately 16 hectares, the site comprises three major mounds—**MTL-1, MTL-2, and MTL-3**—which provide evidence of ancient residential, industrial, and administrative activities. Excavations have revealed mud-brick and baked-brick structures, pottery, beads, bangles, copper implements, seals, and various crafted objects that reflect the sophistication and technological advancement of Harappan society.

Geographical Location

Mitathal is a village and archaeological site situated in the Bhiwani tehsil of Bhiwani district in Haryana, India. It lies approximately 12 kilometers north of Bhiwani city and around 120 kilometers west-northwest of New Delhi. Geographically, the site is located at approximately **28°53’31” N latitude and 76°10’11” E longitude**.

The region of Mitathal occupies an important position within the Indo-Gangetic plains, where ancient river systems created favorable conditions for human settlement. The site was situated between the paleo-channels of the **Chautang River** and the **Yamuna River**, providing access to

water, fertile agricultural land, and suitable environmental conditions for sustained habitation.

Archaeologically, Mitathal consists of three major mounds:

1. MTL-1:
This mound appears to have functioned as an administrative or elite residential center, where evidence of stronger architectural structures and urban planning has been identified.

2. MTL-2:
This area was likely used for ordinary residential settlement, where houses, courtyards, and objects of daily life have been discovered.

3. MTL-3:
This section appears to have been devoted to industrial activities, including the production of bangles, beads, and pottery.

Originally extending over approximately 16 hectares, nearly one-quarter of the site has suffered destruction due to modern agricultural activities, land leveling, and brick-making.

Environmental and Natural Context

The environment of Mitathal shared several characteristics with other settlements of the Indus Valley Civilization, particularly its riverine and semi-arid setting. The region was associated with the ancient **Ghaggar-Hakra river system**, widely believed by many scholars to represent the remnants of the ancient Sarasvati River. The nearby Chautang River functioned as a seasonal watercourse, supplying water during the monsoon season.

The area received an average annual rainfall of approximately **300–500 millimeters**, which was adequate for agricultural activities. Fertile soil and seasonal flooding made the cultivation of crops such as barley, wheat, pulses, and other agricultural products possible. Archaeological evidence suggests that the inhabitants of Mitathal practiced both farming and animal husbandry.

Additionally, local clay deposits provided raw materials for pottery production, while silica-rich sands supported the manufacture of **faience** objects and bangles. This indicates that access to natural resources played a major role in sustaining long-term human occupation at the site.

However, after approximately **1900 BCE**, climatic shifts, declining rainfall, changing river courses, and increasing aridity affected agricultural

productivity. Scholars believe that these environmental changes significantly contributed to the gradual decline of many Harappan settlements, including Mitathal.

Discovery and Early Archaeological Investigations

The archaeological importance of Mitathal first came to light in **1913**, when coins belonging to the **Gupta Period** were discovered on the surface of the site. These discoveries indicated that the area had remained occupied during later historical periods.

During the mid-twentieth century, researchers began discovering Harappan-style pottery, copper implements, bangles, and other ancient objects at the site, leading scholars to suspect that Mitathal was an important settlement associated with the Indus Valley Civilization.

Between **1965 and 1968**, systematic excavations were carried out under the supervision of archaeologist **Suraj Bhan**, during which the site's different cultural phases were scientifically identified. Excavations demonstrated that Mitathal contained clear evidence of **Pre-Harappan, Mature Harappan, and Late Harappan occupations**. These discoveries established Mitathal as a major archaeological site for

understanding the eastern regions of the Harappan Civilization.

Historical and Cultural Phases of Mitathal

Excavations at Mitathal reveal that the site passed through several cultural and historical stages, making it highly important for understanding the rise, development, and transformation of the Indus Valley Civilization. Archaeologists generally classify the site into four major phases: **Pre-Harappan**, **Early Harappan**, **Mature Harappan**, and **Late Harappan** periods.

Pre-Harappan Phase

The earliest occupation at Mitathal belongs to the **Pre-Harappan period**, dating approximately from **4600 BCE to 3800 BCE**. This phase is commonly associated with the **Sothi-Siswal Culture**, which formed an important component in the early cultural development of the Harappan Civilization.

During this stage, settlements were relatively small and semi-permanent in nature. Excavations have revealed simple mud structures, unfired mud-brick walls, pit-like features, and basic domestic architecture. Pottery was generally handmade and decorated with simple motifs or minimal ornamentation.

Economically, the inhabitants of this period depended on pastoralism, hunting, and early agriculture. Faunal remains suggest the domestication of cattle, goats, and sheep, while evidence of hunting demonstrates a diversified subsistence strategy.

Early Harappan Period (ca. 3300–2600 BCE)

During the **Early Harappan period**, significant developments in social organization and settlement stability can be observed at Mitathal. At this stage, local Sothi-Siswal traditions gradually merged with broader Harappan cultural elements.

Pottery from this period appears more refined and wheel-made compared to earlier phases. Black-painted geometric patterns, straight lines, and naturalistic motifs are commonly found on ceramics. Such developments indicate that Mitathal was increasingly becoming part of a wider network of cultural interactions.

Architectural changes also became more evident. Permanent housing structures emerged, while craft production and trading activities expanded. This phase represents a transitional stage toward the fully urbanized Mature Harappan period.

Mature Harappan Period (ca. 2600–1900 BCE)

The **Mature Harappan period** represents the peak of Mitathal's development. During this era, the settlement exhibited advanced urban characteristics comparable to major Harappan cities such as Mohenjo-daro and Harappa.

Excavations reveal evidence of organized urban planning. On **MTL-1**, strong fortification-like walls and planned residential structures have been identified, suggesting administrative or elite residential functions. **MTL-2**, in contrast, appears to have been occupied by ordinary residents and contains evidence of everyday domestic life.

During this phase, the use of standardized bricks, street-like layouts, drainage systems, and planned residential organization reflects the sophisticated urban planning typical of Harappan civilization. The standardized dimensions of bricks, resembling broader Harappan proportions, suggest a degree of centralized planning and architectural consistency.

Economically, Mitathal became an important center of trade and production. Locally manufactured goods appear to have circulated to surrounding regions, while certain raw materials were imported from distant areas. The discovery

of **cubical stone weights**, seals, and semi-precious materials indicates the presence of a regulated commercial system.

Late Harappan Period (ca. 1900–1500 BCE)

Following the Mature Harappan phase, Mitathal experienced gradual transformations associated with the broader decline of the Harappan Civilization. During this period, changes in architecture, urban organization, and craftsmanship became noticeable.

Residential structures became smaller and less systematically planned. Mud bricks increasingly replaced baked bricks, while urban planning appears less rigid than in earlier phases. However, archaeological evidence points toward **cultural continuity rather than sudden collapse**, suggesting that local populations adapted to changing environmental and social conditions.

During this period, the production of **faience bangles, beads, and pottery** continued, although with some decline in refinement and standardization. Archaeologists interpret this stage as one of **gradual cultural transition**, rather than abrupt destruction.

Major Excavation Findings

The excavations carried out under **Suraj Bhan** in **1968** brought international archaeological attention to Mitathal. Different stratigraphic layers revealed a long sequence of occupation, confirming the site's prolonged habitation across multiple cultural phases.

Subsequent investigations conducted in **2010–2011, 2016, 2020, 2021, and 2024** provided additional insights into settlement planning, craft production, and regional trade networks.

Research suggests that Mitathal was not merely an agricultural village but also an organized **industrial and economic center**, participating in local production and broader exchange systems.

Important Archaeological Discoveries at Mitathal

Excavations have yielded numerous artifacts that provide valuable information regarding the daily life, economy, and culture of its inhabitants.

1. Pottery and Ceramics

Mitathal has yielded finely made **red pottery decorated with black-painted geometric motifs**, including leaf-like, scale-like, and linear designs. These ceramics reflect the artistic sophistication and technological skills of Harappan potters.

2. Seals

A significant **steatite seal**, dating approximately to **2100–1900 BCE**, was discovered at the site. The seal contains symbols of the Harappan script, suggesting its use in administrative and commercial activities.

3. Metal Implements

Copper tools, hooks, weapon-like objects, fishing implements, and everyday metal artifacts have also been discovered, demonstrating the development of metallurgy and metalworking traditions.

4. Ornaments and Bangles

Large quantities of beads, bangles, and ornaments made of **faience, stone, bone, and shell** have been uncovered, indicating advanced craftsmanship and an appreciation for personal adornment.

5. Industrial Evidence

Archaeologists have also uncovered kilns, ash deposits, bangle-manufacturing remains, and pottery-related tools, highlighting Mitathal's role

as an important center of craft production and industrial activity.

Settlement Layout and Urban Planning

Archaeological excavations at Mitathal indicate that the site followed important traditions of Harappan urban planning. A clear distinction existed between residential zones, industrial areas, and possibly administrative sectors, reflecting an organized settlement pattern.

MTL-1 appears to have functioned as a central or administrative area, where stronger architectural remains and relatively sophisticated residential structures have been discovered. Excavations revealed houses constructed from mud bricks and baked bricks, containing multiple rooms, courtyards, and spaces for domestic use. Some structures also included storage facilities and hearths for cooking and household activities.

MTL-2 represents an ordinary residential sector, where evidence of daily domestic life has been uncovered. Multi-room houses, household objects, and signs of small-scale domestic industries have been identified. The arrangement of streets and buildings reflects similarities with broader Harappan urban traditions.

MTL-3 appears to have been primarily devoted to industrial activities. Archaeologists uncovered kilns, ash deposits, bangle-making workshops, and pottery-production remains, suggesting specialized craft activities. This spatial separation between habitation, industry, and administration indicates an advanced level of urban organization.

Mud bricks were widely used in construction, while baked bricks appear to have been reserved for stronger or more important structures. Many houses contained central courtyards, which likely served as focal points for family and communal activities. Limited evidence of drainage systems and waste management also reflects Harappan concerns for sanitation and organized settlement planning.

Social Life and Economy

The economy of Mitathal was based on a combination of **agriculture, animal husbandry, craft production, and trade**. Due to its location near fertile plains and seasonal river systems, the inhabitants cultivated crops such as **barley, wheat, pulses, and other agricultural products**.

Zooarchaeological evidence suggests the domestication of cattle, goats, sheep, and other livestock. These animals provided food, milk,

wool, and labor. Some evidence of hunting also exists, indicating that people supplemented their subsistence through the exploitation of wild resources.

Craft production formed a major component of Mitathal's economy. Archaeological evidence demonstrates the manufacture of:

- Pottery and ceramic vessels
- Faience bangles and ornaments
- Copper tools and metal objects
- Decorative items made of stone, bone, and shell

These activities indicate that Mitathal was not merely an agricultural village but also an important **production and craft center** within the Harappan cultural sphere.

Trade Networks and Connections with Other Harappan Sites

Mitathal maintained active relationships with other settlements of the Indus Valley Civilization. Archaeological analysis suggests that several raw materials found at the site originated from distant regions.

For example, the **steatite** discovered at Mitathal has been traced to the Alwar region of Rajasthan, approximately 150 kilometers away. Similarly, certain stone materials and tools were imported from nearby regions.

Mitathal appears to have maintained cultural and economic links with several important Harappan sites, including:

- Rakhigarhi — one of the largest Harappan urban centers in Haryana, sharing similarities in pottery and craft traditions.
- Kalibangan — an important Harappan site where ceramic traditions closely resemble those of Mitathal.
- Banawali — another major Harappan settlement with similarities in seals, administrative systems, and standardized measurements.
- Agroha — a regional center that may have been connected through exchange networks and economic interactions.

These relationships suggest that Mitathal was an active participant in the broader Harappan trade network, involving the exchange of goods, raw materials, technologies, and cultural traditions.

Importance of Mitathal in the Indus Valley Civilization

Mitathal occupies a highly important position in the study of the Indus Valley Civilization, particularly in understanding the civilization's eastern expansion. The site demonstrates that Harappan urban traditions extended beyond Sindh and Punjab into Haryana and northern India.

The significance of Mitathal may be summarized as follows:

1. Evidence of Eastern Harappan Expansion

Mitathal demonstrates that the urban and cultural influences of the Harappan Civilization extended considerably eastward.

2. Example of Cultural Continuity

The site provides evidence of continuous occupation from the Mature Harappan to the Late Harappan phases, helping scholars understand social and cultural transformations.

3. Center of Craft Production and Industry

The evidence of faience production, pottery-making, and metallurgy highlights Mitathal's importance as an industrial center.

4. Understanding Harappan Economic Systems

Imported materials and standardized weights provide valuable insights into the economic organization and trade systems of Harappan society.

Conclusion

Mitathal is an important archaeological site of the Indus Valley Civilization that not only illustrates the eastern spread of Harappan culture but also contributes significantly to understanding its social, economic, and cultural complexity. The settlement remains, pottery, seals, metal tools, ornaments, and industrial installations discovered at the site indicate the presence of an organized, economically active, and technologically sophisticated community.

One of Mitathal's greatest contributions lies in demonstrating that the decline of the Harappan Civilization was not necessarily sudden or catastrophic. Instead, the site reflects a process of

gradual transformation, during which local populations adapted to changing environmental and climatic conditions while preserving aspects of their cultural traditions. Therefore, Mitathal remains a crucial site for understanding the rise, transformation, and decline of the Indus Valley Civilization.

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Mohenjo-daro

Abstract

Mohenjo-daro was one of the most significant urban centers of the Indus Valley Civilization, reaching its peak approximately between 2600 BCE and 1900 BCE. This archaeological site represents an extraordinary example of early urban planning, standardized architecture, advanced sanitation systems, commercial activity, and social organization in human history. The objective of this research paper is to present a critical examination of the geographical, archaeological, historical, and cultural significance of Mohenjo-daro. This section specifically focuses on the geographical setting, environmental factors, discovery, early excavations, and the scholarly contributions of archaeologists who brought this civilization into global academic discourse. The study is based on primary excavation reports, archaeological documentation, and contemporary scholarly research.

1. Introduction

Mohenjo-daro was one of the most important and remarkable urban centers of the Indus Valley Civilization, one of the earliest urban civilizations in the world. Located in the present-day province of Sindh, Pakistan, on the western bank of the Indus River near Larkana, the site transformed the understanding of South Asian antiquity and contributed significantly to global archaeological scholarship (Marshall, 1931).

Until the early twentieth century, the dominant scholarly view maintained that the origins of civilization in the Indian subcontinent were associated primarily with the Aryan period or later developments in the Gangetic plains. However, the discoveries of Mohenjo-daro and Harappa fundamentally challenged this perception. These archaeological sites demonstrated that an advanced urban civilization contemporaneous with ancient Egypt and Mesopotamia had flourished in South Asia, characterized by sophisticated urban planning, standardized architecture, organized sanitation systems, and long-distance trade networks (Possehl, 2002).

The academic significance of Mohenjo-daro also lies in the fact that it is among the few ancient cities where almost every aspect of urban life—

housing, drainage systems, water supply, craftsmanship, trade, and social organization—has been archaeologically documented. Unlike the monumental palaces and temples commonly associated with ancient Egypt or Mesopotamia, Mohenjo-daro lacks clear evidence of grand royal residences or centralized religious monuments. This distinction has generated important scholarly debates regarding the social and political structure of the city (Kenoyer, 1998).

2. Geographical and Environmental Context of Mohenjo-daro

Mohenjo-daro is located in the Larkana District of Sindh, near an ancient course of the Indus River on its western bank. Geographically, the site lies approximately 28 kilometers southwest of Larkana city and about 510 kilometers northeast of Karachi. The region forms part of the fertile alluvial plains of the Indus Valley, where productive agricultural land, riverine water resources, and favorable climatic conditions contributed to urban development (Mackay, 1938).

The city was constructed on an elevated natural platform, likely intended to protect it from seasonal flooding. Archaeological evidence suggests that the city repeatedly suffered from

flood damage, prompting inhabitants to rebuild structures upon earlier layers and gradually elevate the urban landscape over time (Marshall, 1931).

Paleoclimatic studies indicate that during the Mature Harappan period (2600–1900 BCE), monsoon activity in the Indus Valley region was relatively stronger, supporting agricultural productivity. Crops such as wheat, barley, sesame, and cotton were cultivated extensively. However, later climatic shifts, declining monsoon intensity, and changes in river courses may have contributed significantly to the eventual decline of the city (Possehl, 2002).

3. Discovery of Mohenjo-daro: A Revolutionary Archaeological Revelation

The discovery of Mohenjo-daro marked a turning point in the history of archaeology in South Asia. Although local communities had long been aware of the mound's existence, its scholarly identification emerged only in the early twentieth century.

In 1922, Rakhaldas Banerji, an archaeologist affiliated with the Archaeological Survey of India, conducted a systematic examination of the site. Observing extensive remains of baked bricks,

walls, and structural ruins, Banerji recognized that the mound represented a highly ancient and historically significant urban settlement rather than an ordinary historical ruin (Banerji, 1925).

Following Banerji's preliminary reports, John Marshall, then Director-General of the Archaeological Survey of India, recognized the importance of the site and initiated extensive excavations. In 1924, Marshall publicly announced that Harappa and Mohenjo-daro represented the centers of a previously unknown civilization contemporaneous with Egypt and Mesopotamia (Marshall, 1931).

This revelation fundamentally altered prevailing interpretations of South Asian history. Before these discoveries, urban civilization in the Indian subcontinent was generally believed to have emerged much later. Mohenjo-daro demonstrated that a highly developed urban civilization had existed in South Asia during the third millennium BCE.

4. Early Excavations and Major Archaeological Contributors

Excavations at Mohenjo-daro continued in several phases following 1922. During the initial stage, investigations supervised by John Marshall

uncovered organized streets, residential structures, drainage systems, seals, and monumental public architecture (Marshall, 1931).

Subsequently, Ernest John Henry Mackay conducted extensive excavations between 1927 and 1931. Mackay's work focused particularly on residential sectors, domestic architecture, wells, workshops, and evidence of urban daily life. His findings demonstrated that Mohenjo-daro was a carefully planned city characterized by sophisticated civic infrastructure and urban administration (Mackay, 1938).

Later, Mortimer Wheeler advanced archaeological understanding of Mohenjo-daro and the broader Indus Civilization through more systematic analytical methods. Wheeler's scholarship significantly influenced debates concerning chronology, urban defense systems, and theories of civilizational decline (Wheeler, 1968).

5. Scholarly Importance and Research Questions

Research on Mohenjo-daro continues to revolve around several unresolved scholarly questions:

- Why has the Indus script remained undeciphered?

- What was the nature of political organization in the city?
- Was Mohenjo-daro governed through centralized kingship or civic administration?
- Were environmental or economic factors primarily responsible for its decline?

These questions continue to inspire archaeological, anthropological, and historical research, making Mohenjo-daro a central subject of academic inquiry.

6. Urban Planning: An Exceptional Example of Early Urban Engineering

Mohenjo-daro is regarded as one of the most systematically organized cities of the ancient world, whose urban planning appears considerably more structured and technologically advanced than many of its contemporary civilizations. Archaeological evidence indicates that the city was constructed according to a pre-designed urban plan in which streets, residential areas, drainage channels, public buildings, and industrial sectors were carefully arranged in an organized manner (Marshall, 1931).

The urban layout of Mohenjo-daro was fundamentally based on a **grid pattern**, in which the principal streets intersected at right angles

along north–south and east–west axes. This arrangement is considered one of the earliest known examples of organized urban planning, as it facilitated not only transportation and movement but also effective drainage and civic sanitation (Kenoyer, 1998).

The width of the main roads ranged approximately between 3 and 10 meters, while narrower lanes extended into residential neighborhoods. The regularity of this arrangement strongly suggests the existence of centralized planning or some form of municipal administration responsible for regulating construction standards and land organization (Possehl, 2002).

7. Urban Division: The Citadel and the Lower Town

Mohenjo-daro was broadly divided into two principal sections:

1. **The Elevated Citadel Mound**
2. **The Lower Residential Town**

The **Citadel**, constructed upon a raised platform, appears to have been designed to withstand flooding and to accommodate important public structures. This elevated sector contained major

architectural features such as the Great Bath, large public buildings, possible administrative complexes, and spaces for collective activities (Mackay, 1938).

In contrast, the **Lower Town** was primarily residential and included houses, marketplaces, workshops, wells, and craft production areas. Notably, residential architecture throughout the city reflects considerable consistency in layout and planning, indicating the presence of construction norms and an organized social system (Wheeler, 1968).

8. Architectural Technology and Standardized Brick Construction

One of the most remarkable characteristics of Mohenjo-daro is its advanced architectural technology, which reflects a highly developed understanding of urban construction. The majority of structures in the city were built using **baked bricks**, standardized according to a consistent ratio of **1:2:4** (Marshall, 1931).

These bricks generally measured approximately **28 × 14 × 7 centimeters**, suggesting the implementation of uniform construction standards across the city. Such standardization not only reflects technological expertise but also

implies the existence of regulatory oversight governing architectural production and urban construction (Kenoyer, 1998).

Residential buildings commonly contained:

- Central courtyards
- Bathrooms
- Private wells
- Storage rooms
- Multiple chambers
- Upper stories (in some cases)

Archaeologists have also identified staircases within several houses, indicating the existence of multi-storied architecture (Mackay, 1938).

9. Water Supply and the Extraordinary Drainage System

Mohenjo-daro is often described as one of the earliest **"sanitized cities"** of the ancient world due to its sophisticated water supply and drainage infrastructure.

Archaeological excavations have uncovered more than **700 wells**, making the city one of the earliest known examples of widespread urban access to water resources (Marshall, 1931).

Many residential houses contained private bathing areas connected to drainage channels that emptied into covered street drains. These drains were carefully constructed using bricks and often covered with removable slabs for maintenance and cleanliness (Wheeler, 1968).

This system reflects not merely technological sophistication but also a civic consciousness concerning hygiene, public health, and communal sanitation. Many scholars consider it one of the earliest and most advanced examples of urban sanitation in human history (Possehl, 2002).

10. The Great Bath: A Public or Ritual Structure?

Great Bath remains one of the most iconic and academically debated structures at Mohenjo-daro. Measuring approximately **12 meters in length, 7 meters in width, and 2.4 meters in depth**, the structure was constructed using baked bricks, gypsum mortar, and waterproofing techniques designed to prevent leakage (Marshall, 1931).

The bath included stairways descending from both ends, while nearby wells and drainage channels ensured a reliable water supply and disposal system.

Scholars have proposed several interpretations of its function:

- **Ritual purification practices**
- **Collective bathing ceremonies**
- **Public or ceremonial gatherings**

Marshall (1931) interpreted the structure primarily as a ritual or religious installation, whereas some contemporary scholars consider it a civic or ceremonial public facility (Kenoyer, 1998).

11. Granaries, Pillared Halls, and Public Architecture

Mohenjo-daro also contained large structures that may have served collective or administrative purposes. Some buildings have traditionally been identified as **granaries**, although recent scholarship has questioned this interpretation and proposed alternative functions (Possehl, 2002).

A large **pillared hall** has likewise been discovered, which may have functioned as a venue for assemblies, commercial activities, or civic administration (Mackay, 1938).

Significantly, Mohenjo-daro lacks the monumental palaces, military fortresses, or grand temples

commonly associated with civilizations such as Egypt or Mesopotamia. This absence continues to raise important questions regarding the city's political organization.

Some scholars propose that:

- the city may have been governed through a form of civic administration or council;
- commercial and religious elites may have collectively exercised authority;
- or a centralized authority may have existed in a less visibly monumental form (Kenoyer, 1998).

12. Preliminary Conclusions on Urban Life and Social Organization

The evidence discussed in Part 02 clearly demonstrates that Mohenjo-daro was not merely a settlement but a highly organized urban civilization. Its street planning, drainage system, standardized architecture, and public buildings indicate that nearly five thousand years ago the inhabitants of the Indus Valley possessed sophisticated knowledge of urban engineering and civic organization.

13. Material Culture: Seals, Script, and Artistic Expression

The material culture of Mohenjo-daro constitutes one of the most important sources for understanding the intellectual, economic, and administrative systems of the Indus Valley Civilization. Archaeological excavations have yielded a diverse range of artifacts, including seals, figurines, ornaments, pottery, metal tools, toys, and inscriptions, all of which collectively reflect the complexity and sophistication of urban life in the city (Mackay, 1938).

13.1 Seals and the Indus Script

Thousands of seals have been discovered at Mohenjo-daro, most of which were carved from **steatite** (soapstone), subsequently fired to produce durability. These seals commonly depict animals, symbolic motifs, and short inscriptions.

Among the most prominent motifs is the so-called **“Unicorn” seal**, which has become one of the defining symbols of the Indus Civilization. Other depictions include bulls, elephants, buffaloes, rhinoceroses, and composite creatures (Marshall, 1931).

The inscriptions found on these seals are collectively referred to as the **Indus Script**, which remains undeciphered despite extensive scholarly attempts. Researchers estimate that the script

consists of more than **400 distinct signs**, yet no definitive linguistic affiliation has been established (Kenoyer, 1998).

The inability to decipher this script continues to pose one of the greatest challenges in Indus Valley studies, significantly limiting scholarly understanding of political administration, religious institutions, and social organization (Possehl, 2002).

14. Sculpture, Figurines, and Aesthetic Expression

The artistic achievements of Mohenjo-daro are especially evident in its figurines and sculptural traditions, which demonstrate remarkable technical skill and aesthetic sophistication.

14.1 The "Dancing Girl"

Dancing Girl is among the most iconic artifacts discovered at Mohenjo-daro. Standing approximately **10.5 centimeters tall**, the bronze figurine was produced using the **lost-wax casting technique**, indicating advanced metallurgical expertise.

The figure portrays a young woman standing confidently with one hand resting on her hip and adorned with numerous bangles. Many scholars

interpret the sculpture as evidence of refined artistic sensibilities and social aesthetics within Harappan society (Marshall, 1931).

14.2 The “Priest-King”

Priest-King is another important sculptural artifact discovered at the site. This steatite bust depicts a bearded male figure wearing a decorated robe.

Although John Marshall initially interpreted the figure as a priest or ruler, contemporary scholars remain cautious regarding this identification because no direct evidence confirms his political or religious status (Kenoyer, 1998).

15. Economy, Trade, and Craft Production

The economy of Mohenjo-daro was fundamentally based upon **agriculture, specialized craftsmanship, and long-distance trade**.

15.1 Agricultural Economy

Archaeological evidence indicates the cultivation of:

- Wheat
- Barley

- Sesame
- Dates
- Cotton

Cotton production is particularly significant, as Mohenjo-daro provides some of the earliest known evidence for cotton cultivation and textile production in human history (Possehl, 2002).

15.2 Craft Specialization and Industry

Mohenjo-daro possessed highly skilled artisans engaged in the manufacture of:

- Beads and ornaments
- Pottery
- Metal tools
- Seals
- Jewelry
- Faience objects

(Mackay, 1938)

Evidence of materials such as **carnelian**, **lapis lazuli**, shell, and copper suggests access to extensive trade networks and raw materials originating from distant regions.

15.3 Long-Distance Trade

Mesopotamian civilization maintained commercial relations with the Indus Valley Civilization, including Mohenjo-daro. Indus seals and other Harappan goods recovered from Mesopotamian sites indicate active interregional trade connections (Wheeler, 1968).

Trade likely involved commodities such as:

- Cotton textiles
- Precious and semi-precious stones
- Timber
- Metal products
- Agricultural goods

This evidence suggests that Mohenjo-daro functioned not merely as a local urban center but as an important participant in wider Bronze Age economic systems.

16. Social Structure and Everyday Life

Although no deciphered textual evidence exists, archaeological findings offer important insights into the social organization of Mohenjo-daro.

Variations in house size and architectural complexity indicate the presence of some degree of social differentiation; however, the city lacks the extravagant palaces and monumental elite

residences characteristic of Egypt and Mesopotamia. This suggests a comparatively moderate level of social stratification (Kenoyer, 1998).

Domestic architecture frequently included:

- Private wells
- Bathrooms
- Courtyards
- Storage areas

These features imply a relatively high standard of urban living and household organization.

Children's toys, wheeled carts, animal figurines, and gaming objects have also been discovered, providing valuable evidence for family life, recreation, and cultural practices (Marshall, 1931).

17. Religious Life: Possibilities and Scholarly Debates

The absence of monumental temples or large-scale religious architecture makes the reconstruction of Harappan religious life particularly challenging.

Nevertheless, archaeological evidence suggests several possibilities:

- Fertility-related beliefs
- Symbolic reverence for animals
- Ritual purification practices
- Collective ceremonial activities

A well-known seal depicting a horned seated figure has sometimes been associated with an early form of the later Hindu deity Shiva in a yogic posture; however, this interpretation remains highly debated among scholars (Possehl, 2002).

The presence of the Great Bath further strengthens arguments concerning ritual bathing and concepts of purity within Harappan society (Marshall, 1931).

18. The Decline of Mohenjo-daro: A Critical Evaluation

Numerous theories have been proposed regarding the decline of Mohenjo-daro; however, contemporary scholarship generally supports the hypothesis of a **gradual decline** rather than sudden destruction.

18.1 Environmental Transformations

Scholarly research suggests several interconnected environmental factors:

- Declining monsoon intensity
- Increasing aridity
- Changes in the course of the Indus River
- Soil salinization affecting agriculture

These developments may have significantly weakened the city's agricultural and economic sustainability (Possehl, 2002).

18.2 Flooding and Environmental Stress

Excavations have revealed multiple layers of silt deposits, indicating repeated episodes of flooding. Although inhabitants repeatedly reconstructed and elevated urban structures, prolonged environmental stress may ultimately have rendered the city increasingly unsustainable (Mackay, 1938).

18.3 Criticism of the Aryan Invasion Theory

Mortimer Wheeler initially advanced an **Aryan invasion theory**, proposing violent destruction as a contributing factor in the civilization's collapse. However, modern archaeological evidence has largely challenged this interpretation because no substantial evidence of warfare, massacre, or systematic destruction has been found at Mohenjo-daro (Kenoyer, 1998).

Conclusion

Mohenjo-daro was not only the most prominent urban center of the Indus Valley Civilization but also one of the most remarkable examples of early urbanism in human history. Its carefully planned streets, sophisticated drainage systems, standardized architecture, economic organization, and craft specialization collectively demonstrate an advanced level of civic development nearly five thousand years ago.

The importance of Mohenjo-daro extends beyond its archaeological significance; it serves as a crucial case study in understanding early urban evolution, governance, and social organization. Despite more than a century of archaeological investigation, unresolved questions concerning the Indus script, political authority, and religious life continue to stimulate scholarly inquiry, ensuring the enduring relevance of Mohenjo-daro in global historical and archaeological discourse.

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Mundigak

Introduction

Mundigak, located approximately 55 kilometers northwest of Kandahar near Shah Maqsud in present-day Afghanistan, represents one of the most significant prehistoric sites of South and Central Asia. Flourishing between ca. 3500 BCE and 1500 BCE, Mundigak was a major urban settlement within the Helmand Civilization and maintained strong cultural and commercial ties with the Indus Valley Civilization (Casal, 1961; Franke-Vogt, n.d.). Covering nearly 21 hectares, it was second only to Shahr-i Sokhta in scale, underscoring its importance as a Bronze Age center of trade and cultural interaction.

Geographical and Historical Context

Situated along the upper drainage of the Kushk-i Nakhud River in Kandahar Province, Mundigak occupied a strategic position at the crossroads of trade routes linking the Iranian plateau, Baluchistan, Central Asia, and the Indus basin.

Archaeological sequences trace its development from a modest agricultural community in the 5th millennium BCE to a sophisticated urban center by the 3rd millennium BCE (Allchin & Allchin, 1982).

Excavations and Archaeological Discoveries

Between 1951 and 1958, French archaeologist Jean-Marie Casal conducted ten excavation campaigns at Mundigak, revealing a highly organized settlement with monumental architecture and advanced civic planning (Casal, 1961). The site was divided into eleven sectors, uncovering residential quarters, religious buildings, civic structures, and evidence of long-term occupation. Key discoveries included:

- Massive mud-brick structures
- A monumental palace complex
- A pillared temple-like building
- Ritual altars and ceremonial spaces
- Residential compounds and storage facilities

The central mound, rising nine meters, reflected centuries of continuous habitation.

Urban Development and Monumental Architecture

Mundigak's peak, identified as Period IV, was marked by monumental construction. Excavators uncovered a palace complex on elevated ground, suggesting centralized authority, and a temple-like structure with whitewashed pillars and red-painted entrances, indicative of organized religious activity ca. 3000 BCE (Casal, 1961). These features demonstrate a level of urbanization comparable to early Indus settlements. However, by ca. 2200 BCE, Mundigak and Shahr-i Sokhta experienced decline, possibly linked to broader climatic disruptions during the "4.2 kiloyear event" (Possehl, 2002).

Mundigak and the Indus Valley Civilization

Mundigak's significance lies in its close cultural relationship with the Indus Valley Civilization. Archaeological parallels include:

Shared Artistic Motifs

Terracotta figurines of humped bulls and snakes closely resemble motifs from Mohenjo-daro and Kot Diji (Kenoyer, 1998).

Pottery Traditions

Painted ceramics at Mundigak share stylistic affinities with Kot Diji and Amri traditions, featuring geometric designs, pipal leaf imagery, and cattle depictions. These connections highlight regional interaction networks across Baluchistan and the Indus basin (Allchin & Allchin, 1982).

Trade and Exchange

Artifacts such as button seals, copper stamp seals, faience beads, and pottery styles reveal active trade with the Iranian plateau, Baluchistan, and early Harappan communities (Franke-Vogt, n.d.).

Architectural and Ritual Parallels

Ceramic vessels resembling mouse traps, predating Harappan examples, suggest shared ritual practices across regions.

Material Culture and Artifacts

Excavations yielded diverse artifacts reflecting everyday life, technology, and religion:

- Terracotta figurines, especially female forms

- Cattle figurines and symbolic animal imagery
- Bronze tools, needles, axes, and mirrors
- Stone vessels and spinning whorls
- Painted ceramics and faience beads
- Copper pins with spiral loops
- Button seals and stamp seals

A limestone male head sculpture, with stylized features, has been compared to the Indus "priest-king," suggesting shared elite iconography (Kenoyer, 1998).

Religious and Cultural Significance

The presence of temples, ritual spaces, symbolic motifs, and anthropomorphic figurines indicates organized ceremonial traditions. Scholars argue that Mundigak represents one of the earliest centers of institutionalized religious activity in Bronze Age Afghanistan (Franke-Vogt, n.d.).

Conclusion

Mundigak occupies a crucial place in the archaeology of South and Central Asia. Far from being an isolated settlement, it emerged as a thriving Bronze Age urban hub deeply connected to the Indus Valley Civilization and neighboring regions. Its monumental architecture, artistic

traditions, and trade artifacts underscore Afghanistan's role as a cultural mediator in the interconnected civilizations of the Bronze Age.

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Naro Waro Daro

Abstract

Naro Waro Daro is an important archaeological site associated with the Indus Civilization, located in Khairpur District, Sindh, approximately two miles east of Tando Masti Khan Railway Station. The site is notable for representing a cultural transition between the rural traditions of the Indus Civilization and the later urban phase of Harappan society. Discovered in 1935 by the archaeologist Pandit Madho Sarup, the settlement yielded important archaeological evidence, including sophisticated pottery, ornaments, toys, terracotta carts, and human skeletal remains. The site also demonstrates significant cultural connections with nearby Kot Diji, indicating regional interaction and continuity within the broader Indus cultural sphere.

Geographical Location and Discovery

Naro Waro Daro is situated in Khairpur District of Sindh, approximately two miles east of Tando Masti Khan Railway Station. The site forms part of a broader cluster of sandy mounds discovered during archaeological surveys conducted in 1935 by the archaeologist Pandit Madho Sarup. Among these mounds, the southeastern mound was identified as the principal archaeological site and later became known as “Naro Waro Daro.” (1)

The site represents a transitional cultural horizon where evidence of both the rural phase of the Indus Civilization and the succeeding urban phase has been discovered. (2) This indicates that the settlement experienced gradual social, economic, and cultural transformation over time.

Cultural Relationship with Kot Diji

One of the most significant aspects of Naro Waro Daro is its close cultural association with Kot Diji, whose archaeological remains are situated approximately seven miles northwest of the site. Archaeological evidence suggests that the inhabitants of Naro Waro Daro maintained strong cultural and social ties with the people of Kot Diji.

Artifacts recovered from the mound display striking similarities with materials excavated from Kot Diji as well as from Mohenjo-daro. These similarities strongly indicate cultural continuity and interaction among settlements within the Indus Civilization.

Material Culture and Artistic Development

The ceramic assemblage recovered from Naro Waro Daro is considered highly refined in both quality and craftsmanship. The pottery exhibits superior manufacturing techniques, while the painted decorative motifs provide compelling evidence of artistic sophistication and technical maturity among the inhabitants. (3)

Excavations at the site yielded a variety of artifacts, including children's toys, terracotta bullock carts, bangles, finger ornaments, and other objects associated with personal adornment. Many of these artifacts bear close resemblance to items excavated from Mohenjo-daro, suggesting shared artistic traditions and material culture within the Indus Civilization. (4)

In addition to ornamental artifacts, archaeologists recovered fine-quality pottery, reflecting the

advanced ceramic traditions practiced by the inhabitants of the settlement.

Human Remains and Social Life

An important archaeological discovery at Naro Waro Daro was the recovery of a human skeleton, which provides valuable opportunities for further research into burial customs, health conditions, and the biological characteristics of the settlement's inhabitants. Human skeletal remains constitute an important category of archaeological evidence, enabling scholars to reconstruct aspects of social life and demographic patterns in ancient communities.

Conclusion

Naro Waro Daro represents an important convergence of the rural and urban phases of the Indus Civilization. The site offers valuable evidence for understanding cultural transformation, technological advancement, artistic development, and regional interaction in prehistoric Sindh. Its similarities with Kot Diji and Mohenjo-daro further emphasize its significance within the broader archaeological framework of the Indus Civilization. Consequently, Naro Waro

Daro occupies an important position in the study of the cultural evolution of ancient Sindh and the Indus Valley Civilization.

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Nazgani Jo Kandh

Abstract

Nazgani Jo Kandh is an important archaeological site located in Dadu District, Sindh, Pakistan. Situated on the left bank of the Gaj Nai, approximately 1.5 kilometers west of Rohel Jo Kandh, the site has yielded material remains associated with the Amri Culture, a rural Chalcolithic cultural tradition that preceded the urban phase of the Indus Valley Civilization. The site provides valuable evidence for understanding prehistoric settlement patterns, subsistence practices, and cultural development in Sindh. This article examines the geographical setting, archaeological characteristics, historical significance, and cultural context of Nazgani Jo Kandh within the broader framework of prehistoric Sindh.

Introduction

Dadu District occupies a significant place in the archaeological landscape of Sindh due to the

presence of numerous prehistoric and protohistoric sites. Among these is Nazgani Jo Kandh, an archaeological mound located on the left bank of the Gaj Nai, about 1.5 kilometers west of Rohel Jo Kandh. Archaeological investigations indicate that the material remains recovered from the site belong to the Amri Culture, a cultural phase that predates the Mature Harappan urban tradition. Consequently, Nazgani Jo Kandh is an important site for understanding the early stages of social and cultural development in the Indus region.

Geographical Location

Nazgani Jo Kandh is situated in an area influenced by the Gaj Nai, a seasonal stream originating from the Kirthar mountain range. Historically, the Gaj Nai valley provided favorable conditions for human settlement due to the availability of water, fertile soils, and grazing lands. Such environmental advantages encouraged the establishment of early agricultural communities in the region.

The geographical position of the site suggests that its inhabitants relied heavily on local natural resources for their subsistence. During prehistoric times, areas adjacent to seasonal watercourses

were particularly suitable for small rural settlements, agriculture, and pastoral activities.

Archaeological Characteristics

The archaeological remains discovered at Nazgani Jo Kandh are associated with the Amri Culture, one of the earliest agricultural and village-based cultural traditions of Sindh. The Amri cultural phase is generally regarded as an important precursor to the urban development of the Indus Valley Civilization and dates broadly to the fourth and early third millennia BCE.

Typical archaeological materials associated with the Amri Culture include:

- Handmade or wheel-finished pottery
- Red or buff pottery decorated with black geometric designs
- Flint stone tools
- Remains of residential structures
- Evidence of agricultural and pastoral economies

The material remains found at Nazgani Jo Kandh correspond closely with these characteristics, providing strong evidence for its classification as an Amri cultural site.

The Amri Culture and the Development of the Indus Civilization

The Amri Culture represents an important stage in the cultural evolution of prehistoric Sindh. Communities belonging to this tradition developed agricultural practices, craft production, and increasingly organized social structures. Archaeologists consider the Amri phase to be one of the foundations upon which the later urban civilization of the Indus Valley emerged.

Sites such as Nazgani Jo Kandh are therefore of considerable importance because they document the gradual transformation of small rural communities into the more complex societies that eventually produced major urban centers such as Mohenjo-daro and Harappa.

Historical Significance

Nazgani Jo Kandh is significant because it provides evidence of pre-urban settlement patterns in Sindh. The site demonstrates that small agricultural communities were already established in environmentally favorable locations long before the rise of large urban centers. These settlements formed the social and economic foundation for the development of later complex societies.

The archaeological evidence from Nazgani Jo Kandh contributes to our understanding of ancient subsistence strategies, settlement organization, craft traditions, and human adaptation to the natural environment. As such, the site serves as an important source for reconstructing the cultural history of prehistoric Sindh.

Conclusion

Nazgani Jo Kandh is a significant archaeological site in Dadu District associated with the Amri Culture, a rural cultural tradition that preceded the urban phase of the Indus Valley Civilization. Located near the Gaj Nai, the site occupied a favorable environmental setting that supported early human settlement and agricultural activity. The archaeological remains recovered from the site provide valuable evidence regarding prehistoric lifeways, economic practices, and cultural development in Sindh. Future archaeological investigations and scientific excavations may further clarify the site's role in the broader process of cultural evolution that ultimately led to the emergence of the Indus Civilization.

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Naka

Abstract

Naka is an important archaeological site located near Gamark (Gamarak) Hill in Dadu District, Sindh, Pakistan. The site was discovered in 1976 by the archaeologist Louis Flam. Archaeological evidence, particularly the pottery assemblage, indicates a close cultural relationship with the Indus Valley Civilization. The pottery recovered from Naka closely resembles that found at Mohenjo-daro, suggesting that the settlement was integrated into the broader cultural sphere of the Harappan Civilization. This article examines the geographical setting, archaeological discoveries, cultural significance, and historical importance of Naka within the context of the Indus Civilization.

Introduction

Dadu District contains numerous archaeological sites representing different periods of Sindh's ancient past. Among these sites, Naka occupies a significant position due to its association with the Indus Valley Civilization. Located near Gamark Hill,

the site was identified by Dr. Louis Flam in 1976 during archaeological surveys in the region. The discovery of Harappan-style pottery and stone-built architectural remains indicates that Naka was an important settlement connected to the wider Indus cultural network.

Geographical Location

Naka is situated near Gamark Hill in Dadu District. The region lies between the Kirthar mountain ranges and the plains of Sindh, an area that has long provided favorable conditions for human settlement. Seasonal watercourses, access to natural resources, and cultivable land supported the development of communities in this landscape throughout prehistory.

Its strategic location likely facilitated interaction between settlements in the mountainous zones and those in the Indus plains, contributing to the movement of goods, ideas, and cultural traditions.

Discovery and Archaeological Investigation

The site was discovered in 1976 by Dr. Louis Flam during archaeological surveys of western Sindh. His investigations revealed evidence of an organized settlement and contributed significantly

to the understanding of prehistoric occupation in the Kirthar region.

One of the most notable findings at Naka is the use of stone in architectural construction. While many major Indus urban centers are known for their extensive use of baked brick, the stone-built structures at Naka demonstrate local adaptations to available building materials. This reflects how communities within the Indus cultural sphere modified architectural practices according to regional environmental conditions.

Archaeological Characteristics

Several important archaeological features have been identified at Naka, including:

- Remains of stone-built structures
- Various types of pottery
- Harappan-style ceramic traditions
- Evidence of residential occupation

The pottery assemblage is particularly significant because its forms, manufacturing techniques, and decorative characteristics closely resemble pottery recovered from Mohenjo-daro. Such similarities indicate that Naka shared cultural traditions with major centers of the Indus Civilization and participated in the broader

exchange of ideas and technologies characteristic of Harappan society.

Relationship with the Indus Civilization

The ceramic evidence strongly associates Naka with the Indus Valley Civilization. Standardized pottery traditions, planned settlements, and distinctive material culture are among the defining features of the Harappan world. The artifacts recovered from Naka demonstrate that the site either formed part of the Harappan settlement system or developed under strong Harappan cultural influence.

The resemblance between the pottery of Naka and Mohenjo-daro suggests sustained cultural interaction among settlements across Sindh. These connections may have involved trade, technological exchange, and the dissemination of artistic and craft traditions.

Historical Significance

Naka is important for understanding the western extent of Harappan influence in Sindh. The site demonstrates that the cultural traditions of the Indus Civilization were not confined to major urban centers but also reached settlements located in foothill and peripheral regions.

Furthermore, the stone architecture found at the site provides valuable evidence regarding regional adaptations within the Indus cultural sphere. Such findings help archaeologists understand how different communities utilized local resources while maintaining broader cultural affiliations.

The study of Naka contributes to a more comprehensive understanding of settlement distribution, architectural practices, and cultural interaction within the Indus Civilization.

Conclusion

Naka is a significant archaeological site in Dadu District that illustrates the expansion and influence of the Indus Valley Civilization in western Sindh. Discovered by Dr. Louis Flam in 1976, the site has yielded stone-built architectural remains and pottery closely resembling that of Mohenjo-daro. These discoveries demonstrate the site's connection with the wider Harappan cultural tradition and highlight its importance for understanding regional variations within the Indus Civilization. Future archaeological excavations and scientific investigations may provide further insights into the site's chronology, function, and role within the broader Harappan world.

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Nal

Introduction

Nal is one of the most significant archaeological sites in the Jhalawan region of Balochistan, Pakistan. The site has yielded evidence belonging to both the rural cultural phase and the urban tradition associated with the broader development of the Indus Civilization. Archaeological discoveries at Nal have played a crucial role in understanding the cultural evolution of prehistoric societies in Balochistan and their relationship with the later urban centers of the Indus Valley.

According to Mortimer Wheeler, the civilization that flourished at Nal predates the urban civilization of Mohenjo-daro. The archaeological excavations conducted at the site suggest that Nal was occupied during multiple periods and represents a long sequence of human habitation.

Location and Environmental Setting

Nal is situated in the Jhalawan region of Balochistan, approximately three miles southeast of Khuzdar. The settlement was established near a natural spring emerging from the surrounding hills, providing a reliable source of water that supported human habitation and agricultural activities. The availability of water and fertile land contributed significantly to the development of the settlement.

Discovery and Excavation

The archaeological excavation of Nal was carried out in 1925 by Harold Hargreaves. The excavations revealed that the site had been inhabited during different periods. Hargreaves concluded that the earliest occupational layer represented a rural settlement characterized by the use of stone tools. These findings indicate that Nal originated as a village community before developing into a more complex settlement.

Burial Practices

One of the most remarkable discoveries at Nal is its cemetery. Archaeologists uncovered numerous graves containing human burials. In several instances, more than one individual was interred within the same grave. Some tombs contained the

remains of adults, women, and children buried together, suggesting the practice of family burials.

The deceased were generally buried in an east-west orientation. Pottery vessels were frequently placed alongside the dead as grave goods. Many of these vessels contained animal bones, ornaments, beads, and other personal belongings, reflecting the belief that such items might be useful in the afterlife. These burial customs provide valuable insights into the social and religious beliefs of the inhabitants.

Pottery and Material Culture

The pottery discovered at Nal is among the finest examples of prehistoric ceramic art in South Asia. The vessels are decorated with elaborate painted motifs, geometric patterns, and artistic designs. Archaeologists have noted strong similarities between the pottery and ornaments recovered from Nal and those discovered at Mohenjo-daro and Harappa.

The distinctive painted ceramics of Nal are so unique that archaeologists recognize them as a separate ceramic tradition known as the “Nal Ware Culture.” These ceramics represent a high level of artistic achievement and technical skill.

Technology and Craft Production

Excavations have yielded copper and bronze vessels, tools, and weapons, indicating that the inhabitants possessed knowledge of metallurgy. Stone ornaments, beads, seals, and other decorative objects were also recovered from residential structures.

The presence of seals and specialized craft products suggests the existence of trade networks and increasing social complexity. The craftsmanship displayed in the production of ornaments and ceramics reflects a well-developed artisanal tradition.

Architecture

The houses at Nal were constructed on stone foundations, demonstrating an understanding of durable building techniques. Although the superstructures were likely made from mud and other perishable materials, the surviving foundations provide evidence of permanent settlement.

The architectural remains indicate that the inhabitants lived in organized residential units and had established a stable community based on agriculture and animal husbandry.

Economy

Agriculture and pastoralism formed the basis of the local economy. The inhabitants cultivated crops and raised domesticated animals for food and other purposes. The discovery of animal bones in both habitation areas and graves demonstrates the importance of livestock in daily life.

Trade likely supplemented agricultural production, as evidenced by the presence of ornaments, seals, and specialized artifacts that suggest interaction with neighboring regions.

Relationship with the Indus Civilization

The archaeological materials recovered from Nal display notable similarities with those of the Indus Civilization. Pottery styles, ornaments, burial practices, and certain aspects of material culture indicate cultural connections between Nal and the later urban centers of Mohenjo-daro and Harappa.

For this reason, Nal is regarded as one of the important cultural traditions that contributed to the emergence of the Indus Civilization. The site illustrates the gradual transformation from village-based communities to more complex societies

that eventually developed into the urban civilization of the Indus Valley.

Conclusion

Nal occupies a prominent position in the archaeology of Balochistan and South Asia. Its cemetery, painted pottery, stone-founded architecture, metal artifacts, seals, and evidence of agriculture and pastoralism provide a comprehensive picture of a prehistoric community that flourished before the rise of the mature Indus Civilization. The site serves as a vital link in understanding the cultural processes that led to the development of one of the world's earliest urban civilizations.

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Nausharo

Introduction

The Indus Valley Civilization is regarded as one of the oldest urban civilizations in the world. Due to its advanced urban planning, trade networks, industrial activities, agricultural system, and social organization, it occupies a distinguished place in global history. The major urban centers of this civilization generally include Mohenjo-daro, Harappa, Dholavira, and Kalibangan. However, modern archaeological research has demonstrated that the Indus Civilization was not confined solely to these major urban centers; rather, it also included numerous smaller and transitional settlements that played a fundamental role in its development. One such significant site is Nausharo.

Nausharo is an important archaeological site located in the Kachi-Bolan region of Balochistan, Pakistan. It dates from the Late Chalcolithic period to the Mature Harappan phase of the Indus Civilization. The site remained occupied through

several cultural phases from approximately 3100 BCE to 1900 BCE, making it crucial for understanding the origins, expansion, and decline of the Indus Civilization.

The importance of Nausharo lies particularly in its close association with the nearby site of Mehrgarh, one of the earliest known agricultural settlements in South Asia. Nausharo served as a transitional link between the later phases of Mehrgarh and the highly organized urban system of the Indus Civilization. Archaeological excavations reveal a blend of local Balochistan traditions and standardized Harappan cultural features, illustrating a gradual process of social and cultural transformation.

Furthermore, artifacts discovered at Nausharo—including pottery, seals, terracotta figurines, necklaces, ceramic vessels, and evidence of craft production—indicate that the site functioned not only as a residential settlement but also as a center of trade and manufacturing. These findings demonstrate extensive cultural interaction and economic connectivity with other regions of the Indus Civilization.

Geographical Location and Natural Environment

Nausharo is situated in Balochistan, Pakistan, at approximately 29°22′ north latitude and 67°35′ east longitude. The site lies nearly six kilometers south of Mehrgarh in the Kacchi Plain. This geographical position made it an important route of communication and cultural interaction in antiquity, particularly because of its proximity to the Bolan Pass, which linked the mountainous regions of Balochistan with the Indus plains.

The region is characterized by a semi-arid climate, where rainfall is limited; however, seasonal flooding and water channels historically provided suitable conditions for agriculture. Fertile alluvial soils, access to water, and abundant clay deposits supported agricultural production and pottery-making activities. Such environmental conditions contributed significantly to the establishment and sustainability of early human settlements.

Nausharo's geographical significance is further enhanced by its strategic location between the highlands of Balochistan, the fertile plains of the Indus region, and trade routes leading toward Central Asia. Consequently, the site became an important center for cultural exchange, commerce, and human movement.

Discovery and Excavation of Nausharo

The archaeological site of Nausharo was initially identified during regional surveys conducted in Balochistan by the French Archaeological Mission. Systematic excavations were carried out between 1985 and 1996 through the collaborative efforts of the French Archaeological Mission and Pakistan's Department of Archaeology and Museums. The excavation work was directed by the renowned French archaeologist Jean-François Jarrige, who had previously played a major role in the excavations of Mehrgarh.

Excavations uncovered mudbrick houses, drainage systems, pottery workshops, kilns, ceramic vessels, seals, terracotta figurines, and faunal remains. These discoveries revealed that Nausharo was a continuously occupied settlement that underwent multiple phases of social, economic, and cultural development.

Research further established that Nausharo experienced several cultural periods, classified by archaeologists as Period I, II, III, and IV. During the earlier phases, local traditions predominated, while later periods exhibited standardized Harappan features such as uniform pottery, urban organization, and the use of seals.

Historical and Cultural Importance

Nausharo should not merely be understood as an archaeological settlement; rather, it serves as an important laboratory for understanding the cultural evolution of South Asia. The site illustrates how early agricultural villages gradually transformed into urban societies. The transition from the agrarian traditions of Mehrgarh to the urbanized system of the Indus Civilization is clearly preserved in the archaeological layers of Nausharo.

According to archaeologists, Nausharo provides compelling evidence that the Indus Civilization was not the product of a sudden revolution, but rather the outcome of gradual local evolution, technological advancement, agricultural stability, and expanding trade relations.

Cultural and Historical Phases of Nausharo

Archaeological excavations indicate that Nausharo underwent several historical phases, categorized by scholars into Period I, II, III, and IV. These phases are fundamental for understanding the formation, maturity, and decline of the Indus Civilization. The significance of Nausharo lies in the continuity of cultural development evident at the site, illustrating a gradual transformation from early agrarian traditions to an organized urban civilization.

Period I (c. 3100–2500 BCE): Early or Pre-Harappan Phase

The earliest occupation at Nausharo is associated with Period I, which belongs to the Late Chalcolithic or Early Bronze Age. During this phase, the settlement was characterized by mudbrick domestic structures, an agricultural economy, and local pottery traditions. The inhabitants cultivated crops such as wheat and barley while also depending on animal husbandry.

Pottery recovered from this phase exhibits local stylistic traditions, including geometric patterns, linear motifs, and circular designs. The diversity of ceramics suggests gradual improvements in technical skills and craftsmanship. Additionally, terracotta figurines of humans and animals discovered at the site likely reflect religious beliefs or social practices.

Scholars argue that during this period, Nausharo was strongly influenced by the nearby settlement of Mehrgarh, making it an important transitional stage between the later phases of Mehrgarh and the emergence of Early Harappan cultural traditions.

Period II–III (c. 2500–2100 BCE): Mature Harappan or Urban Phase

This phase represents the peak of Nausharo's development, when the settlement became fully integrated into the broader network of the Indus Civilization. During this period, organized urban features became prominent, including standardized construction techniques, planned streets, drainage systems, and uniform pottery production.

Excavations revealed mudbrick houses, multi-room residential structures, and sophisticated drainage facilities. Such urban planning closely resembles that found at major Indus urban centers, including Mohenjo-daro and Harappa.

Large quantities of standardized pottery, seals, ornaments, beads, and terracotta objects were discovered, suggesting the presence of an organized economic system and active trade relations. Seals, in particular, are believed to have played a role in administration, trade, and identification processes.

Evidence of craft specialization is also prominent during this phase. Pottery workshops, kilns, and partially finished ceramic products uncovered at the site indicate the presence of skilled artisans engaged in specialized production activities.

Urban Structure and Architectural Features

Archaeological remains suggest that Nausharo was planned in a systematic manner. Residential buildings were generally constructed from standardized mudbricks and underwent repeated reconstruction throughout different occupational phases.

The drainage systems discovered at the site are of exceptional importance, as they demonstrate advanced methods of wastewater management. Such urban infrastructure reflects the remarkable organizational capacity of the Indus Civilization.

Some architectural evidence also suggests a degree of spatial organization between domestic and industrial zones. Pottery production areas, for example, appear to have been partially separated from residential quarters, indicating social organization and the division of labor within the settlement.

Material Culture and Major Artifacts

Pottery and Ceramics

Pottery occupies a central position in the material culture of Nausharo. Ceramic vessels recovered from different phases vary significantly in shape, composition, and decorative style. During the earlier phases, hand-made pottery predominated,

whereas the Mature Harappan period witnessed the widespread use of wheel-made standardized ceramics.

Certain vessels feature black painted motifs on red surfaces, a characteristic artistic tradition commonly associated with the Indus Civilization.

Terracotta Figurines

Excavations yielded numerous terracotta figurines representing both humans and animals. Female figurines are often interpreted as symbols related to fertility or religious beliefs, while figurines of cattle and other animals reflect the importance of agrarian life and animal husbandry.

Ornaments and Beads

Nausharo also produced beads crafted from semi-precious and precious materials, including carnelian, faience, and steatite. These discoveries indicate that the inhabitants not only utilized local resources but also maintained long-distance trade connections with distant regions.

Seals and Trade Networks

Seals discovered during the Mature Harappan phase hold particular significance, as they point

toward organized systems of trade, identity, and administration. Their stylistic resemblance to seals from other Indus centers strongly suggests that Nausharo was part of a wider cultural and economic network.

Taken together, these discoveries demonstrate that Nausharo was not merely a small rural settlement but rather an important center engaged in agricultural, industrial, and commercial activities.

The Importance of Nausharo in the Indus Civilization

Nausharo occupies a highly significant position in understanding the evolution of the Indus Civilization, as it functioned as a transitional link between early agricultural settlements and the mature urban phase of Harappan civilization. Archaeological evidence suggests that Nausharo was not merely a residential settlement; rather, it served as an active center of social, economic, and technological transformation, where local traditions of Balochistan merged with the standardized cultural features of the Indus Civilization.

The geographical location of Nausharo greatly enhanced its importance. Situated near the Bolan

Pass, the site occupied a strategic position between Balochistan, the Indus plains, and Central Asia. This location facilitated the movement of raw materials, technologies, and cultural ideas across regions. According to archaeologists, Nausharo functioned as a "peripheral but integrated settlement," connected to major Indus urban centers while simultaneously preserving its local cultural identity.

Artifacts uncovered at the site—including carnelian beads, steatite seals, terracotta objects, and standardized pottery—provide strong evidence of trade and craft specialization. These materials demonstrate that Nausharo played an active role in regional economic networks. Moreover, the site confirms that the Indus Civilization was not solely dependent upon major urban centers but also relied upon a broader network of smaller settlements that contributed to production, exchange, and social integration.

Archaeological and Scholarly Analysis

The excavations at Nausharo have significantly contributed to scholarly understanding of the process commonly referred to as "Harappanization," a gradual cultural transformation through which smaller agrarian

communities evolved into components of an organized urban civilization.

The French archaeologist Jean-François Jarrige argued that cultural change at Nausharo was neither abrupt nor revolutionary; rather, it emerged through a continuous and gradual developmental process. In the earlier phases, local ceramic traditions and architectural practices dominated the settlement, whereas later periods witnessed the emergence of standardized bricks, organized urban planning, and administrative seals associated with the Mature Harappan phase.

Nausharo also challenges the conventional interpretation that the success of the Indus Civilization depended exclusively upon major cities such as Mohenjo-daro and Harappa. In reality, smaller settlements such as Nausharo were equally essential in sustaining the civilization by supplying goods, facilitating craft production, and maintaining regional communication networks.

Archaeological remains further indicate a considerable degree of craft specialization, particularly in pottery production. Pottery workshops, kilns, and unfinished ceramic vessels suggest the presence of skilled artisans producing

goods not only for local use but possibly for exchange with neighboring settlements as well.

The Decline of Nausharo

During Period IV (c. 2100–1900 BCE), archaeological evidence points toward a gradual decline in the settlement. This period witnessed a reduction in organized urban construction, changes in pottery styles, and evidence of partial abandonment.

Scholars have proposed several explanations for this decline, including environmental change, climatic instability, and a reduction in agricultural productivity. Many researchers argue that fluctuations in monsoon systems and prolonged arid conditions between approximately 2200 and 1900 BCE negatively affected settlements across Balochistan and the wider Indus region.

Some evidence also indicates cultural interactions with the Oxus Civilization during the final occupational phases, suggesting that Nausharo remained connected to external networks even as urban systems weakened. However, there is no substantial archaeological evidence of violent destruction or military invasion. Consequently, most scholars favor theories of gradual

transformation and environmental stress rather than sudden collapse.

Conclusion

Nausharo represents one of the most important archaeological sites for understanding the historical development of the Indus Civilization. It provides crucial evidence regarding the transformation of early agricultural communities into organized urban societies. The site not only reflects the indigenous cultural traditions of Balochistan but also demonstrates strong connections with the broader urban system of the Indus Civilization.

The discovery of residential structures, pottery, seals, terracotta figurines, ornaments, and evidence of specialized craftsmanship reveals that Nausharo functioned as an important economic, technological, and social center. At the same time, the site reinforces the argument that the Indus Civilization did not emerge suddenly but evolved gradually over centuries through agricultural stability, technological advancement, trade, and cultural interaction.

Ultimately, the archaeological investigations at Nausharo have contributed significantly to modern understanding of South Asian prehistory,

the geographical expansion of the Indus Civilization, and the origins of early urbanism. Therefore, Nausharo will continue to hold immense importance for future archaeological and historical research.

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Nehto

Introduction

The **Indus Valley Civilization (IVC)** is regarded as one of the world's earliest urban civilizations, distinguished by its organized urban planning, trade networks, agriculture, craftsmanship, and international connections. Numerous large and small settlements of this civilization have been discovered across present-day Pakistan and India. Many of these settlements functioned as commercial centers and maritime ports. Among these important sites is **Nehto**, which is recognized as a significant urban, commercial, and maritime center associated with the Indus Civilization.

The archaeological remains of Nehto are located in the **Umerkot Taluka of Tharparkar District**, on the eastern bank of the **Hakra River**. Archaeological evidence suggests that in ancient times the city was situated along the seashore, with seawater extending close to the settlement. Due to subsequent geographical changes and

fluctuations in sea levels, the coastline gradually receded, leaving Nehto far inland today. This transformation provides important evidence of ancient environmental and geographical changes in the region.

Geographical Significance and Location

Owing to its strategic geographical position, Nehto occupied an important place within the trade network of the Indus Civilization. Situated on the eastern bank of the Hakra River, the city was connected to riverine commerce, while its proximity to the coast enabled it to function as a maritime trading center. The shoreline's closeness to Nehto during antiquity contributed significantly to its development as a port settlement.

From a commercial perspective, Nehto was linked with northern Sindh and other Indus settlements such as **Siri Kola**, Harappa, and Kalibangan. Goods were transported through the Hakra River by boats and vessels to Nehto, from where they were shipped to distant regions through maritime routes. Consequently, Nehto emerged as an important intermediary center connecting riverine and maritime trade.

According to **Hugh Trevor Lambrick**, the inhabitants of Nehto traveled to Upper Sindh via

the Hakra River and maintained economic relations with foreign lands through maritime commerce. Lambrick regarded Nehto as an important gateway for the international trade connections of the Indus Valley people.

Archaeological Remains and Site Structure

Nehto is situated approximately **15 feet above sea level**, a feature that provides significant evidence regarding its ancient maritime character. Archaeological investigations indicate that the remains of Nehto belong to two distinct periods represented by two separate mounds: an eastern mound and a western mound.

The western mound belongs to the period of the Indus Civilization and serves as important evidence of the site's antiquity and its association with the Harappan cultural tradition. In contrast, the eastern mound belongs to a comparatively later historical period, suggesting that the area remained a center of human occupation across different eras.

Among the discoveries at Nehto, **red pottery vessels** are of particular significance, displaying strong similarities to the material culture of the Indus Civilization. Other artifacts recovered from the site include bangles, coins, toys, models of

bullock carts, terracotta wheels, and various ornaments. These findings provide valuable insights into the social, economic, and cultural life of the settlement.

Seals and Evidence of Writing

A rectangular seal has also been discovered at Nehto. It bears three symbols of the Indus pictographic script engraved upon its surface. This seal is especially important because a similar inscribed seal has been recovered from Mohenjo-daro. Such similarities indicate that Nehto formed part of the broader administrative, commercial, and cultural system of the Indus Civilization.

Although the Indus script has not yet been fully deciphered, seals are generally believed to have played an important role in trade, identification, and administrative activities. The discovery of such a seal at Nehto further strengthens evidence for the city's economic activities and commercial significance.

Economic and Cultural Importance

Due to its strategic location along both maritime and riverine routes, Nehto played an important role in the economic system of the Indus Civilization. The city's port facilitated local and

international trade, making Nehto one of the principal commercial centers of southern Sindh. Archaeological evidence also points to industrial and craft activities, including pottery production and other forms of craftsmanship.

The commercial significance of Nehto is further demonstrated by the variety of artifacts discovered there. These objects were not merely intended for daily use but also reflect social organization, trade exchange, and economic stability within the settlement.

Conclusion

Nehto occupies an important place in history as an urban, maritime, and riverine trading center of the Indus Civilization. Its location along the Hakra River and on an ancient maritime route enabled it to play a central role in commercial activities. The archaeological remains, seals, and material culture recovered from the site confirm that Nehto was an integral part of the extensive commercial and cultural network of the Indus Civilization. Therefore, Nehto is significant not only for understanding the ancient history of southern Sindh but also for research into the maritime trade and urban development of the Indus Civilization.

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Orangi

Introduction

Among the lesser-known archaeological sites of Sindh, **Orangi** holds significance as a prehistoric settlement associated with the early phases of human habitation in the region. Although systematic excavation has not yet been conducted at the site, preliminary archaeological surveys suggest that it belongs to the **prehistoric period**, thereby offering valuable evidence for understanding the ancient cultural landscape surrounding Karachi and the wider Sindh region.

Geographical Location

The ancient site of **Orangi** is located in **Karachi**, approximately **one and a half kilometers west of the seventh milestone of Manghopir**. Its geographical position indicates that the area may have once provided a favorable environment for prehistoric communities, particularly due to its

proximity to natural routes and surrounding ecological resources.

The strategic placement of ancient settlements near accessible landscapes often reflects the inhabitants' dependence on water sources, hunting grounds, and raw materials necessary for survival and tool-making.

Archaeological Survey and Findings

During archaeological exploration, **N. G. Majumdar** discovered scattered pottery fragments across the site, indicating the presence of an ancient settlement. The recovery of these pottery remains suggests that the inhabitants possessed knowledge of ceramic production and domestic material culture.

In addition to pottery sherds, **flint-bladed stone tools** were also found at the site. Such tools are particularly significant in prehistoric archaeology, as they provide evidence of early technological practices related to hunting, food preparation, and other subsistence activities. Flint tools are often associated with prehistoric societies that relied on stone technology before the widespread use of metals.

Historical and Archaeological Importance

The importance of Orangi lies in its identification as a **prehistoric archaeological site**, reflecting a period prior to recorded history and organized urban civilization. The presence of flint tools and pottery fragments indicates that human occupation in the Karachi region dates back to very early periods.

Although no formal excavation has yet been undertaken, the material evidence recovered through surface surveys suggests that Orangi has considerable archaeological potential. Future excavations may reveal additional cultural layers, settlement structures, and artifacts capable of shedding light on prehistoric lifeways in Sindh.

Conclusion

Orangi represents an important yet understudied prehistoric site in the Karachi region. The scattered pottery sherds and flint-bladed stone tools discovered by archaeologist **N. G. Majumdar** indicate the existence of an ancient settlement connected with prehistoric culture. Since systematic excavation has not yet been conducted, the site remains an important subject for future archaeological research aimed at understanding the earliest phases of human occupation in Sindh.

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Pabumath

Introduction

Pabumath is an important archaeological site associated with the Indus Valley Civilization (IVC), located near Suvai village in Rapar Taluka of Kutch district, Gujarat, India. The site lies within the south-western territorial sphere of the Indus Civilization, a region where several significant Harappan settlements have been identified. The Kutch region holds particular archaeological importance for understanding the geographical expansion, maritime trade, defensive planning, and regional cultural adaptations of the Indus Civilization.

The significance of Pabumath is reflected in the archaeological remains discovered during excavations, including architectural structures, a large building complex, seals, ornaments, copper artifacts, pottery, and faunal remains. These discoveries provide valuable evidence regarding the social, economic, and cultural life of the settlement. In particular, the discovery of a

unicorn seal firmly associates the site with Mature Harappan cultural traditions, since unicorn motifs are considered one of the most distinctive symbols of the Indus Civilization.

Geographical Setting and Regional Importance

Pabumath is situated in the Kutch district of Gujarat, one of the most important southern zones of the Indus Valley Civilization. Geographically, Kutch is a unique landscape characterized by semi-arid terrain, desert conditions, and coastal environments. In such ecological settings, Harappan communities developed sophisticated strategies for survival, including water management systems, trade networks, defensive structures, and adaptive economic practices.

The geographical location of Pabumath is especially important because it lies near several major Harappan settlements, including Dholavira, Desalpur, Surkotada, Netra-Khissar, and Meghpar. The concentration of these sites suggests that Kutch functioned as an organized cultural and economic zone of the Indus Civilization, where settlements maintained commercial, defensive, and cultural interactions.

Archaeological evidence from the region indicates that Harappan communities adapted successfully to Kutch's semi-arid environment through mixed agro-pastoral economies. Due to its proximity to inland and coastal trade routes, it is likely that Pabumath also participated in broader regional exchange systems.

History of Archaeological Excavations

The archaeological importance of Pabumath increased significantly when the Archaeological Survey of India (ASI) initiated systematic excavations at the site. Excavations were conducted in multiple phases during 1977–78, 1978–79, and 1980–81. These investigations aimed to examine the cultural sequence, architectural layout, and material culture of the settlement.

During excavations, archaeologists carefully studied the site's stratigraphy, revealing that Pabumath represented an organized settlement with residential and possibly administrative structures. One of the most important discoveries emerged during the 1980–81 excavation season, when a large building complex was uncovered. Such architectural remains suggest that the settlement was not merely a small rural

habitation, but potentially an organized socio-economic or administrative center.

Archaeologists have proposed that large building complexes in Harappan settlements may have served communal, administrative, or trade-related purposes. Similar large-scale architectural remains at other Indus sites have been interpreted as indicators of urban organization, economic regulation, and sophisticated settlement planning.

Archaeological Importance of Pabumath

Artifacts recovered from Pabumath indicate that its inhabitants were engaged in craftsmanship, trade, and organized daily life. The presence of seals, beads, copper objects, and ornaments reflects developed artisanal traditions and regional economic participation.

In the Harappan world, seals functioned not merely as symbols of identity but also as instruments of administration and commerce. Therefore, the discovery of a unicorn seal at Pabumath considerably strengthens its cultural association with the Mature Harappan system and highlights its significance within the broader Indus Civilization network.

Overview of Excavated Artifacts

Pabumath has yielded a significant range of archaeological materials that provide important insights into the social, economic, and cultural life of the settlement. Particularly during the 1980–81 excavations, numerous artifacts were recovered alongside a large architectural complex, reflecting the inhabitants' technological skills, trade relations, and organized daily activities. Archaeological analysis indicates that the material remains of Pabumath closely correspond with the traditions of the Mature Harappan phase of the Indus Valley Civilization.

The excavated materials include seals, beads, copper objects, ornaments, pottery, and faunal remains. Collectively, these findings contribute to understanding the settlement's economic structure, craft specialization, and cultural practices.

The Unicorn Seal and Its Administrative Significance

Among the most important discoveries at Pabumath is a **unicorn seal**, regarded as one of the defining symbols of the Mature Harappan Civilization. Unicorn seals are generally associated with Harappan commercial and administrative systems. Such seals often contain animal imagery accompanied by short inscriptions, likely serving

purposes of ownership identification, trade regulation, or administrative control.

The unicorn motif is among the most frequently occurring symbols in the Indus script corpus, despite the fact that no such animal existed in reality. Scholars have suggested that the image may have represented a religious symbol, a merchant guild, a social identity, or a form of ideological symbolism.

The discovery of a unicorn seal at Pabumath strongly indicates that the site participated in the wider economic and administrative network of the Indus Civilization.

Ornaments and Craftsmanship

Excavations uncovered **shell bangles, beads, steatite micro-beads, and copper bangles**, suggesting that the inhabitants of Pabumath valued personal adornment and possessed specialized craft traditions.

Particularly noteworthy are the finely crafted **steatite micro-beads**, which demonstrate an advanced degree of technical expertise. The manufacture of such miniature beads required precision tools and sophisticated production

techniques, reflecting the technological advancement of Harappan artisans.

Shell bangles are archaeologically significant because they were often produced from marine materials obtained through coastal exchange networks. Given Kutch's proximity to maritime environments, it is plausible that the inhabitants of Pabumath participated in coastal trade systems. Similar ornaments have also been found at nearby Harappan sites such as Dholavira and Surkotada, indicating regional cultural continuity.

Metal Objects and Technological Knowledge

Pabumath also yielded **copper bangles, needles, and antimony rods**, indicating knowledge of metallurgy and metalworking.

The discovery of copper needles suggests the possibility of textile production, leatherworking, or sewing-related domestic activities. Textile manufacture is generally regarded as an important economic component of Harappan society, and such tools may indicate participation in those productive processes.

The presence of antimony rods is equally intriguing. Some scholars propose that these objects were used for cosmetic purposes, such as

preparing eye cosmetics (kohl), while others argue for their role in specialized metallurgical activities. Regardless of their exact function, such objects suggest a refined social life and concern for bodily adornment.

Pottery and Cultural Identity

A substantial quantity of **pottery** was discovered at Pabumath, including:

- Large and medium-sized storage jars
- Beakers
- Dishes
- Dish-on-stand vessels
- Perforated jars

Of particular importance is the discovery of **fine red pottery decorated with black-painted motifs**, representing a characteristic feature of Harappan ceramic traditions. These vessels frequently bear geometric designs, linear patterns, and decorative motifs that reveal both aesthetic sensibilities and cultural identity.

Archaeologists have proposed multiple interpretations for perforated jars. Some scholars suggest they were used for grain storage, straining processes, or even fermentation-related activities.

The style, structure, and decorative patterns of Pabumath pottery strongly indicate the site's cultural affiliation with the Mature Harappan tradition.

Animal Remains and Economic Life

Faunal remains recovered from Pabumath include **cattle, buffalo, sheep, fish, wild pig, and rabbit**, all of which provide valuable evidence regarding subsistence strategies and economic organization.

The presence of cattle and buffalo indicates that pastoralism formed an essential component of the settlement's economy. These animals likely served multiple purposes, including agricultural labor, dairy production, meat consumption, and transportation. Sheep may have contributed wool and meat resources.

Fish remains suggest the exploitation of aquatic resources, which is consistent with the geographical conditions of the Kutch region. The presence of wild pig and other wild fauna further indicates that hunting may have supplemented the community's food supply.

On this basis, the economy of Pabumath may be interpreted as a **mixed agro-pastoral system**,

supplemented by hunting, fishing, and regional exchange activities.

Fortification and Defensive System

Pabumath has also yielded archaeological evidence of **fortification**, indicating the settlement's organizational and defensive importance. Fortification is a recurring feature at several sites of the Indus Valley Civilization, but it appears to have been particularly significant in the Kutch region. Alongside Pabumath, nearby Harappan settlements such as Desalpur, Surkotada, Dholavira, Kotada, Kanmer, Sevakia, and Chitrod have also produced evidence of defensive walls or fortified enclosures.

Scholars have proposed several explanations for the construction of such fortifications. First, they may have served as protection against environmental threats, including flooding or climatic instability. Second, they may have functioned to secure important structures, storage facilities, and organized settlement areas. Third, some archaeologists argue that fortifications may have protected trade routes, livestock, and economic resources from external threats.

Considering the semi-arid environment of Kutch and the strategic importance of trade routes in the region, the fortifications at Pabumath were likely intended for both administrative organization and defensive purposes. Consequently, the settlement may be interpreted not merely as a habitation site, but as a structured center with social and economic significance.

Comparative Analysis with Other Harappan Sites in Kutch

The archaeological importance of Pabumath becomes clearer when compared with other Harappan settlements of the Kutch region. For example, Dholavira is renowned for its sophisticated urban planning, water management systems, and monumental architecture, whereas Surkotada is particularly notable for evidence of fortification and the controversial discovery of possible horse remains.

Similarly, Desalpur is recognized for its strong fortified walls. Although Pabumath was not as large or monumental as these major urban centers, the discovery of seals, fine beads, copper artifacts, painted pottery, and substantial architectural remains demonstrates that it functioned as an organized regional settlement

connected to the wider Harappan cultural and economic system.

The significance of Pabumath also lies in its contribution to understanding the role of **small and medium-sized Harappan settlements**. Beyond the major cities, such settlements formed the foundation of the Indus Civilization by facilitating resource distribution, regional trade, craft production, and local administration.

Archaeological Significance

The archaeological materials recovered from Pabumath demonstrate that the Indus Civilization was not restricted solely to large urban centers but consisted of an interconnected network of settlements of varying scales. The unicorn seal suggests participation in broader systems of trade and administration, while the presence of finely crafted beads and copper artifacts reflects developed artisanal traditions.

Faunal remains indicate a diversified subsistence economy involving pastoralism, hunting, fishing, and possibly limited agriculture. Such an economic strategy would have been highly adaptive in the semi-arid ecological setting of Kutch.

In this regard, Pabumath serves as an important case study for understanding **regional diversity**, **economic adaptation**, and **cultural interaction** within the Indus Valley Civilization.

Conclusion

Pabumath is an important archaeological site of the Indus Valley Civilization located in the Kutch district of Gujarat, India. Excavations conducted between 1977–78 and 1980–81 revealed significant evidence, including a large building complex, a unicorn seal, shell bangles, steatite beads, copper objects, painted pottery, and faunal remains. These findings collectively reveal a socially organized settlement with developed craft traditions and economic complexity.

Evidence of fortification further strengthens the interpretation that Pabumath was an organized settlement of strategic and administrative significance. In association with other Harappan sites of Kutch, Pabumath contributes substantially to understanding the regional organization and cultural diversity of the Indus Civilization. Future archaeological investigations at the site may further illuminate the southern extent and regional dynamics of Harappan civilization.

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Pandhi Wahi

Introduction

Pandhi Wahi is one of the significant archaeological sites of Sindh, located near the Nara Nai in the Johi Taluka of Dadu District, at the foothills of the Kirthar Mountains. The site is of considerable importance for understanding the evolution of rural communities that existed prior to the urban phase of the Indus Valley Civilization (IVC). Archaeological excavations suggest that Pandhi Wahi functioned as a settlement where pastoralism, agriculture, and early craft production formed the basis of subsistence. The material remains unearthed at the site not only illuminate the socio-economic structure of ancient Sindh but also indicate possible cultural and commercial interactions with regions such as Balochistan, Afghanistan, and Mesopotamia.

Geographical Setting and Archaeological Significance

The archaeological remains of Pandhi Wahi are situated in Johi Taluka of Dadu District, near the Nara Nai stream and beneath the Kirthar mountain range on an elevated natural terrace. This geographical location suggests that the settlement was strategically established with access to water resources, grazing lands, and construction materials. Archaeological evidence indicates that the site predates the mature urban civilization of Mohenjo-daro and belonged to an earlier phase characterized by small rural settlements dependent upon agriculture and animal husbandry.

Excavations at the site have revealed two distinct cultural layers. The lower stratum yielded pottery associated with the Amri cultural phase, reflecting the presence of an early agrarian community. In contrast, the upper layer produced characteristic Harappan ceramics, particularly red pottery decorated with black painted motifs, demonstrating the site's interaction with broader cultural developments within the Indus Valley Civilization.

Material Culture and Artistic Traditions

Among the artifacts recovered from Pandhi Wahi, pottery, precious beads, spearheads, and flint tools are particularly notable. Some of the beads

discovered at the site closely resemble those found at the ancient Afghan site of Mundigak, suggesting the existence of regional cultural and commercial networks. Furthermore, decorative motifs painted on pottery commonly include pipal leaves, fish scales, and depictions of bulls, reflecting both the artistic traditions and economic life of the inhabitants.

The representation of bulls bears similarities to motifs associated with the Kulli-Mehi cultural tradition of Balochistan, while fish-scale patterns resemble designs found at Mohenjo-daro. Such parallels indicate that although Pandhi Wahi remained a rural settlement, it maintained cultural links with neighboring regions and civilizations.

Settlement Structure and Social Organization

The inhabitants of Pandhi Wahi primarily relied upon pastoralism and agriculture for their livelihood. Archaeological evidence indicates that the settlement consisted of small rectangular houses constructed for domestic habitation. Stone was extensively used in the foundations of these structures, while the upper portions were built with mud, clay plaster, and organic materials. In some cases, roofing was constructed using reeds and wooden elements covered with thick layers of

mud to strengthen the structure and provide insulation.

One of the most significant features of Pandhi Wahi is the presence of two distinct categories of residential structures. The central settlement area, located upon a naturally elevated mound, appears to have contained houses belonging to the village chief or socially prominent families. Surrounding this central core, scattered residential clusters and isolated dwellings extended over a considerable distance. These peripheral houses, where broken pottery fragments and flint tools have been discovered in substantial quantities, most likely belonged to ordinary farmers, pastoralists, and laboring groups. Such a settlement pattern suggests an early form of social differentiation and organized village life.

Craft Production and Utilization of Natural Resources

The area surrounding Pandhi Wahi possessed rich deposits of flint stone, which served as the principal raw material for the production of tools. Archaeological remains further indicate the existence of specialized workshops or production areas near the settlement, where artisans manufactured stone implements. Large quantities

of flint debris, unfinished fragments, and completed tools have been recovered, demonstrating that the inhabitants were not solely dependent on agriculture and livestock rearing but also engaged in local craft specialization.

The strategic location of Pandhi Wahi at the foothills of the Kirthar Mountains provided easy access to stone resources, enabling the inhabitants to construct durable buildings and produce efficient stone tools. This reflects a sophisticated adaptation to the surrounding natural environment and highlights the community's technological capabilities.

Water Management and Agricultural Economy

The establishment of Pandhi Wahi was closely connected to the availability of water resources. A natural spring located near the settlement likely served as the principal source of water for drinking, domestic activities, and irrigation. Archaeological traces of a small water channel extending from the spring indicate the existence of an early irrigation system designed to supply cultivable land with water.

The presence of this rudimentary hydraulic arrangement demonstrates that the inhabitants

possessed a practical understanding of water management and agricultural planning. Geological observations further suggest that the spring was considerably more active in antiquity, making sustained settlement and farming activities feasible in the region.

Trade Significance and Interregional Connections

The importance of Pandhi Wahi extended beyond its role as an agricultural settlement, as it also appears to have occupied a strategic position along ancient trade routes. Archaeological interpretations suggest that the settlement was situated on a commercial corridor linking the Indus region with Mesopotamia (modern Iraq). Trading caravans traveling through the Mula Pass are believed to have passed through or near Pandhi Wahi on their way toward western regions. This geographical placement highlights the settlement's significance within broader networks of exchange and communication.

Such evidence suggests that Pandhi Wahi was not merely an isolated rural village but an active participant in regional economic interactions. The presence of material parallels with Balochistan and Afghanistan further reinforces the argument that the inhabitants maintained connections extending beyond the immediate locality.

Conclusion

Pandhi Wahi represents an important archaeological site for understanding the early rural culture of the Indus Valley region. The material remains recovered from the settlement indicate that its inhabitants practiced agriculture and pastoralism while simultaneously engaging in craft production, tool manufacturing, and the management of water resources. The coexistence of Amri and Harappan cultural elements, together with evidence of links to Balochistan, Afghanistan, and Mesopotamia, underscores the broader cultural and economic significance of the site.

The settlement provides valuable insight into the transitional processes that preceded the rise of urbanism in the Indus Valley Civilization. As such, Pandhi Wahi occupies an important position in reconstructing the developmental trajectory of prehistoric societies in Sindh and contributes substantially to the archaeological understanding of early village life in South Asia.

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Pae Jo Kotriyo

Introduction

Pae Jo Kotriyo is one of the significant archaeological sites of Sindh that contributes to the understanding of the evolution and cultural continuity of the Indus Valley Civilization. The site is located approximately 10 kilometers south of Rajo Dero in Sindh. Archaeological discoveries from this site, particularly pottery remains, indicate associations with both the Amri and Harappan cultural phases. Consequently, Pae Jo Kotriyo serves as an important site for understanding the historical transition from rural cultural traditions to urban civilization in prehistoric Sindh.

Geographical Location

Pae Jo Kotriyo is situated within the historical geographical region of Larkana, an area recognized as one of the principal centers of ancient settlements in the Indus Valley. Due to the proximity of the Indus River and the fertility of the

surrounding plains, this region has been suitable for human settlement since ancient times. Therefore, Pae Jo Kotriyo may be regarded as an important settlement that developed within this favorable ecological setting.

Archaeological Evidence and Cultural Affiliation

Archaeologists have recovered pottery and other material remains from Pae Jo Kotriyo that are associated with both the Amri and Harappan periods. The Amri culture is generally linked with the early or pre-urban phase of the Indus Civilization, whereas the Harappan period represents the mature urban stage of the civilization. The presence of material culture related to both periods suggests that the site remained occupied through multiple historical phases.

It is possible that Pae Jo Kotriyo developed from an early agrarian and village-based settlement into a community influenced by urban Harappan traditions. The form, decoration, and manufacturing techniques of pottery recovered from the site provide important evidence regarding cultural interaction and social transformation.

Historical Significance

Pae Jo Kotriyo is historically significant because it strengthens the concept of cultural continuity in Sindh. Archaeological evidence suggests that the site was not only inhabited during the pre-Harappan phase but also continued to be occupied during the urban Harappan period. Such sites are essential for understanding the developmental stages of the Indus Valley Civilization.

Furthermore, the site offers valuable insights into the ancient socio-economic structure of Sindh, where agriculture, pottery production, and local trade may have constituted important aspects of daily life.

Conclusion

Pae Jo Kotriyo is an important archaeological site in Sindh that provides evidence of cultural continuity between the Amri and Harappan periods. Material remains discovered at the site indicate that the settlement persisted from a rural cultural phase into the period of urban civilization. Further scientific excavation and research may provide a deeper understanding of the site's social, economic, and cultural significance. Within the broader study of the Indus Valley Civilization, Pae Jo Kotriyo should be regarded as an important archaeological reference point.

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Pathani Damb I

Pathani Damb I, also known as **Pathani Kot**, is an important proto-historic archaeological site associated with the Indus Valley Civilization. The site is located in the Kachi District, near the town of Gandava in Jhal Magsi. Geographically, this region forms part of the plains of Balochistan, which historically played a significant role in agriculture, trade, and cultural interaction. The location of Pathani Damb I demonstrates that the influence of the Indus Civilization extended beyond Sindh and Punjab into the interior regions of Balochistan.

Geographical Location and Environmental Background

Pathani Damb I is situated in an area connected to ancient trade routes and fertile plains. Archaeologists have considered the Kachhi Plains of Balochistan favorable for early agricultural development and the establishment of proto-urban settlements. The geographical features of

the region, including seasonal rivers, cultivable lands, and transportation routes, played a vital role in supporting ancient communities.

The strategic geographical position of Pathani Damb I suggests that the site may have functioned not only as a residential settlement but also as a center for trade and administration. Due to its similarities with other urban settlements of the Indus Civilization, scholars have proposed that it may have served as an important regional urban center.

Discovery and Initial Survey

Pathani Damb I was first identified in 1983 by the renowned British archaeologist Beatrice de Cardi during an archaeological survey. While examining the site, de Cardi noted substantial structural remains and cultural materials, indicating that it was not a simple rural settlement but rather a large and organized habitation.

According to de Cardi's observations, the site covered approximately **100 hectares**, which indicates a considerably large settlement for its period. Based on its size, structural remains, and archaeological materials, Pathani Damb I was considered a potential **Harappan metropolis** or a major urban center. This interpretation is

particularly important because evidence of large-scale Harappan urban centers in Balochistan remains relatively limited.

Archaeological Importance

The significance of Pathani Damb I lies in its extensive size, urban characteristics, and the variety of artifacts discovered at the site. It contributes valuable information about urban planning, trade, social organization, and cultural practices within the Indus Civilization. Archaeologists suggest that further excavation may provide deeper insights into the western frontier of the Indus Civilization.

Particularly noteworthy are the traces of **baked brick constructions**, which indicate an advanced level of architectural knowledge. Such constructions are commonly associated with important administrative, defensive, or public structures in urban settlements, reflecting the existence of a sophisticated society.

Therefore, Pathani Damb I is regarded as an important link in the study of the Indus Civilization, as it offers valuable evidence regarding the civilization’s geographical expansion, social complexity, and interregional connections.

Pathani Damb I has yielded significant archaeological evidence through surveys and excavations, revealing important aspects of its urban nature, craftsmanship, and social organization. Archaeological investigations indicate that Pathani Damb I was not merely an ordinary settlement but likely a well-organized and complex urban center where habitation, craft production, trade, and symbolic or ritual activities coexisted.

Excavation and Structural Remains

Excavations at Pathani Damb I uncovered remains that suggest a planned urban settlement. Among the discoveries were traces of a large structure interpreted by archaeologists as a **citadel**. Similar elevated or fortified areas have also been identified at major Indus sites such as Mohenjo-daro and Harappa, where they are generally believed to have served administrative, ceremonial, or defensive purposes.

Evidence of **baked brick construction** was also discovered at the site, representing an important marker of architectural advancement. The use of baked bricks is commonly associated with permanent settlements, urban planning, and organized construction activities. This finding

further strengthens the interpretation of Pathani Damb I as a developed urban center.

Pottery and Material Culture

A substantial quantity of **ceramic sherds** was recovered during excavation, providing valuable insights into the daily life and cultural activities of the settlement. Pottery constituted an essential component of Indus material culture and was used for food storage, water preservation, domestic activities, and ritual practices.

The site also yielded **painted clay bangles**, reflecting the aesthetic sensibilities and artistic traditions of the community. Such ornaments indicate that personal adornment and social identity held significance among the inhabitants. In addition, **shell bracelets** were discovered, providing evidence of long-distance trade networks, as marine shell materials would have had to be transported from coastal regions into inland Balochistan.

Jewelry, Seals, and Craftsmanship

Among the notable finds were a **carnelian bead** and a **steatite bead**. Carnelian was a highly valued semi-precious stone in the Indus Civilization, frequently used in jewelry and symbolic objects.

The presence of such materials suggests either local craftsmanship or active participation in long-distance trade networks.

The torso of a **female figurine** was also unearthed, which may have been associated with fertility beliefs, religious symbolism, or social representation. Similar female figurines have been found at several Indus sites and are sometimes interpreted by scholars as representations of fertility cults, although no universal consensus exists regarding their exact meaning.

In addition, a **clay rattle** was discovered, which may have functioned as a child's toy or perhaps played a role in ritual or ceremonial practices. Such objects provide valuable insights into the everyday social and cultural life of ancient communities.

Pathani Damb Inscriptions and the Indus Script

Recent excavations conducted during **2020–2021** led to a particularly important discovery: several seals bearing the mysterious Indus script. Among these were four seals depicting the famous **"Indus unicorn"** and a tiger-like animal, accompanied by inscriptions in the still undeciphered script.

The presence of these seals suggests that Pathani Damb I may have functioned as an administrative or commercial center, since seals in the Indus Civilization are generally associated with trade, ownership, and systems of regulation.

A remarkable discovery was a **tablet divided into three distinct registers**, decorated with complex imagery. The upper register depicts a **horned and scarfed figure** seated on a stool with one arm raised, facing a group of **seven similarly horned and scarfed women**. The middle register portrays **three backward-looking animals**, each accompanied by hieroglyphic or symbolic signs. The lower register presents **four backward-looking animals**, also accompanied by symbols. One of these animals bears a single horn, commonly referred to as the **"Indus unicorn,"** while another displays a twig-like motif on buffalo-shaped horns—a feature repeated in the third and fourth animals.

This highly symbolic tablet raises important questions concerning the religious beliefs, mythological ideas, and visual symbolism of the Indus Civilization and continues to attract scholarly attention and debate.

Pathani Damb I has provided important archaeological evidence regarding the social,

economic, and cultural life of its inhabitants. Although large-scale excavations at the site remain limited, the available findings suggest that Pathani Damb I was a developed, organized, and multifaceted urban settlement that functioned as an important center on the western frontier of the Indus Valley Civilization.

Social Life and Cultural Organization

The ornaments, figurines, bangles, and toy-like artifacts recovered from the site reveal the complexity of social life at Pathani Damb I. **Painted clay bangles**, **shell bracelets**, and **semi-precious stone beads** indicate that personal adornment, artistic taste, and social identity were highly valued among the inhabitants. Such objects not only fulfilled aesthetic functions but may also have symbolized social status and cultural identity.

The torso of a female figurine discovered at the site raises important questions regarding social and religious beliefs. Some archaeologists associate such figurines with fertility cults or ritual practices, while others interpret them as representations of ordinary social life. Regardless of interpretation, the artifact demonstrates the presence of symbolic and cultural expression within the community.

The discovery of a clay rattle or toy also suggests that childhood activities and social upbringing held importance in daily life. Such artifacts are particularly valuable for reconstructing the everyday experiences of ancient societies.

Economy, Trade, and Craftsmanship

The available evidence suggests that craftsmanship and trade played an important role in the economy of Pathani Damb I. The presence of **carnelian** and **steatite beads** indicates either local production or acquisition through trade networks.

Particularly significant is the discovery of **shell bracelets**, since marine shell materials would have had to be transported from coastal regions to inland Balochistan. This strongly suggests commercial interaction with coastal zones, particularly Sindh and the Makran coast. It is also possible that Pathani Damb I functioned as an important center along overland trade routes where goods were exchanged.

The discovery of seals and inscriptions further supports the interpretation that some form of administrative and economic system existed at the site. Within the Indus Civilization, seals were commonly associated with trade, ownership, and

the movement of goods; therefore, Pathani Damb I may have served as a regional commercial and administrative hub.

Civilizational and Archaeological Importance

The considerable size of Pathani Damb I, extending across approximately **100 hectares**, makes it one of the most important archaeological sites in Balochistan. Based on its scale, structural remains, seals, inscriptions, and urban characteristics, many scholars regard it as a **possible Harappan metropolis**.

The seals bearing the Indus script and the three-register symbolic tablet discovered during the **2020–2021 excavations** are particularly significant because they raise new questions regarding the religious symbolism, mythology, and undeciphered writing system of the Indus Civilization. The recurring image of the **"Indus unicorn"**, in particular, continues to remain one of the most intriguing symbols for researchers.

Pathani Damb I is also significant because it broadens the conventional understanding of the geographical extent of the Indus Civilization. The site demonstrates that Harappan cultural and economic influence extended deeply into the interior regions of Balochistan.

Conclusion

Pathani Damb I is an exceptionally important archaeological site that contributes valuable knowledge regarding the urban, economic, and cultural complexity of the Indus Valley Civilization. The remains of baked brick structures, ornaments, figurines, seals, and examples of the Indus script collectively indicate the existence of an organized and advanced society. Recent discoveries have further increased the importance of the site, especially in relation to understanding the Indus script and the symbolic or religious dimensions of Harappan culture.

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Phang

Abstract

Phang is an archaeological site located approximately 300 meters northwest of Kohtarash in Dadu District, Sindh, Pakistan. Archaeological evidence indicates that the site belongs to the Rural Cultural Phase, commonly associated with the Amri Culture, which predates the urban development of the Indus Valley Civilization. Although limited archaeological investigations have been conducted at the site, its cultural affiliation makes it an important source of information regarding early agricultural communities, settlement patterns, and the cultural evolution of prehistoric Sindh. This article examines the geographical setting, archaeological characteristics, historical significance, and cultural context of Phang.

Introduction

Dadu District occupies an important position in the archaeological landscape of Sindh due to the presence of numerous prehistoric sites representing various stages of cultural development. Among these sites is Phang, an ancient settlement located approximately 300 meters northwest of Kohtarash. Archaeological studies indicate that the site belongs to the Rural Cultural Phase, a period that preceded the emergence of the urban centers of the Indus Valley Civilization.

The significance of Phang lies in its contribution to understanding the origins of settled agricultural communities and the gradual social transformations that ultimately led to the rise of one of the world's earliest urban civilizations.

Geographical Location

Phang is situated in a region of Dadu District that historically benefited from access to natural resources and seasonal watercourses. Its proximity to Kohtarash places it within the foothill zone of the Kirthar mountain range, an area that provided favorable environmental conditions for prehistoric human settlement.

The surrounding landscape would have supported a mixed economy based on agriculture,

pastoralism, and hunting. Communities in such regions typically established settlements near water sources and cultivable land, enabling long-term occupation and economic stability.

Archaeological Characteristics

Based on the available archaeological evidence, Phang has been classified as a site belonging to the Rural Cultural Phase or Amri cultural tradition. Sites associated with this cultural phase generally contain the following types of material remains:

- Handmade or wheel-finished pottery
- Red or buff-colored ceramic vessels
- Flint stone tools
- Remains of mud-built residential structures
- Evidence of agricultural and pastoral activities

Although detailed excavation data from Phang remain limited, its cultural classification suggests that it was a small agricultural or pastoral settlement occupied during the pre-urban period of Sindh's history.

Cultural Context: The Amri Tradition

The Rural Cultural Phase, often identified with the Amri Culture, represents one of the most

important prehistoric cultural traditions of Sindh. Dating approximately from 3600 BCE to 2600 BCE, this phase preceded the Mature Harappan period and played a crucial role in the development of social and economic systems that later characterized the Indus Valley Civilization.

Communities belonging to the Amri tradition established permanent villages, practiced agriculture and animal husbandry, and developed increasingly sophisticated ceramic technologies. These developments laid the foundation for the emergence of large urban centers during the Mature Harappan period.

Historical Significance

Sites such as Phang are of considerable historical importance because they provide evidence for the early stages of social and cultural development in Sindh. The site demonstrates that organized rural communities existed in the Dadu and Kirthar regions long before the rise of urban settlements.

The study of such settlements helps archaeologists understand how prehistoric populations adapted to their environment, managed local resources, and developed economic and social structures that eventually

contributed to the formation of the Indus Civilization.

Furthermore, Phang contributes to a broader understanding of settlement distribution and cultural diversity in prehistoric Sindh, highlighting the importance of small rural communities in the region's historical development.

Conclusion

Phang is an important archaeological site in Dadu District associated with the Rural Cultural Phase or Amri Culture. Located near Kohtarash, the site reflects the agricultural and pastoral lifeways of prehistoric communities in Sindh before the emergence of urban civilization. Although archaeological information from the site remains limited, its cultural significance is substantial. Future excavations and scientific investigations may provide additional insights into the chronology, settlement structure, and cultural development of Phang, thereby enhancing our understanding of the early foundations of the Indus Valley Civilization.

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Pir Shah Jurio

Introduction

The Indus Valley Civilization is regarded as one of the earliest urban civilizations in the world, flourishing approximately between 3300 BCE and 1300 BCE across a vast region of South Asia. Major urban centers of this civilization, such as Mohenjo-daro, Harappa, Dholavira, and Lothal, have long remained the focus of scholarly investigation. However, the study of smaller coastal and port settlements has increasingly contributed to a better understanding of the maritime, commercial, and economic dimensions of the civilization. Among these significant coastal settlements is **Pir Shah Jurio**, located near the eastern bank of the Hab (Hub) River in the coastal region of Sindh.

Pir Shah Jurio is a relatively small but highly important archaeological site associated with the **Mature Harappan Phase** of the Indus Civilization.

Archaeologists suggest that the settlement likely functioned as a **coastal harbor or maritime trading station**, facilitating riverine and sea-based commercial activities. The geographical setting of the site, together with the nature of its material remains, marine resources, and cultural artifacts, strongly indicates that the Indus Civilization was not limited to inland urban centers but extended its commercial and cultural influence into coastal regions.

The importance of Pir Shah Jurio lies particularly in its role as one of the southwesternmost known settlements of the Indus Civilization, providing valuable evidence for environmental adaptation and coastal subsistence strategies. Archaeological discoveries from the site—including pottery fragments, flint tools, marine shells, and Harappan-style artifacts—suggest that the inhabitants relied heavily on fishing and coastal resources while possibly participating in maritime trade networks.

Geographical Location of Pir Shah Jurio

Pir Shah Jurio is situated in the coastal region near Karachi, on the eastern bank of the Hab River in Sindh, Pakistan. The site lies approximately 6.5 kilometers northeast of the river's mouth, where the Hab River empties into the Arabian Sea.

Geographically, the settlement occupies an elevated conglomerate terrace approximately 35 meters above sea level, a strategic location that would have offered protection against floods and coastal disturbances.

From an archaeological perspective, the location appears highly strategic because the Hab River likely served as an important route connecting inland settlements with maritime trade networks in antiquity. Consequently, Pir Shah Jurio may have functioned as an intermediary center for the transportation of goods, the exploitation of marine resources, and regional interaction.

Furthermore, Pir Shah Jurio appears to have formed part of a broader network of coastal Harappan settlements, including Balakot and Sutkagen Dor. These sites collectively provide valuable insights into the maritime networks, coastal economy, and overseas trade connections of the Indus Civilization.

Environmental and Ecological Context

The surrounding environment of Pir Shah Jurio in antiquity was likely rich in riverine and marine resources. The Hab River, originating in the Pab Range of southeastern Balochistan and flowing toward the Arabian Sea, provided essential

opportunities for water access, subsistence, agriculture, herding, and transportation.

The presence of **mangrove ecosystems** in the surrounding coastal zone supported abundant fish, shellfish, mollusks, and other marine species, forming an important dietary resource for local populations. Archaeological evidence suggests that the inhabitants relied substantially on marine shells and fishing activities. Such environmental adaptation demonstrates the resourcefulness and ecological intelligence of Harappan communities.

At the same time, climatic conditions—including limited rainfall, seasonal flooding, and coastal environmental changes—would have significantly influenced patterns of settlement and subsistence. It is likely that the inhabitants adapted their economic activities seasonally, shifting between fishing, pastoralism, and local exchange depending on environmental circumstances.

Discovery and Early Research

Pir Shah Jurio was first identified by Pakistani archaeologist and geographer Abdur Rauf Khan during archaeological surveys of coastal Sindh conducted in the late 1960s and 1970s. In 1979, the site was formally recognized as a **Harappan**

harbor settlement, owing to the presence of characteristic pottery, architectural remains, and its strategic geographical position, all of which suggested maritime significance.

Later investigations by Italian archaeologist Paolo Biagi and other researchers further confirmed the site's association with the **Mature Harappan Phase**. Modern scientific studies, particularly **radiocarbon dating**, have placed the occupation of the site within the third millennium BCE, corresponding to the peak period of the Indus Civilization.

Archaeological Structure and Physical Layout of the Site

The archaeological structure of Pir Shah Jurio indicates that it was a relatively small-scale but strategically significant Harappan settlement. The site was established on a naturally elevated terrace along the eastern bank of the Hab River, a location that appears to have been carefully selected for environmental, economic, and logistical reasons. Its elevated position enabled inhabitants to monitor both riverine and coastal activities while reducing vulnerability to seasonal flooding and marine disturbances.

Surface evidence, including pottery scatters, stone foundations, and cultural debris, demonstrates the existence of an organized settlement pattern. Although Pir Shah Jurio lacks monumental architecture comparable to major urban centers of the Indus Civilization, such as Mohenjo-daro or Harappa, archaeological remains strongly suggest that it was an active habitation site with a specialized coastal function.

Stone foundations discovered at the site indicate the use of locally available construction materials. However, centuries of coastal erosion, rainfall, and environmental degradation have severely damaged much of the original architecture, leaving only fragmentary structural remains. Moreover, the presence of a modern shrine and graveyard built over portions of the archaeological mound has further complicated excavation and preservation efforts.

Some archaeologists have also proposed that the site may have contained facilities associated with **harbor activities**, such as docking or loading points for boats. Although definitive architectural evidence for a constructed harbor remains limited, the proximity of the site to the river mouth and the possibility of navigable tidal waters

strengthen the argument that Pir Shah Jurio functioned as a coastal maritime station.

Artifacts and Material Culture

The artifacts recovered from Pir Shah Jurio reveal strong cultural connections with the **Mature Harappan tradition**. Pottery, lithic tools, shell objects, and ornamental materials discovered at the site provide valuable evidence concerning the subsistence patterns, craftsmanship, and regional interactions of its inhabitants.

Pottery Assemblage

The pottery recovered from the site largely consists of **Harappan Red Ware**, characterized by red clay surfaces decorated with black painted geometric patterns, linear motifs, and simple artistic designs. These ceramic vessels were likely used for domestic storage, food preparation, and water preservation.

Of particular significance are the **perforated vessels**, which are widely recognized at Harappan settlements. Scholars suggest that such vessels may have been used for processing or preserving fish, salt, or marine products, thereby reflecting the coastal orientation of the settlement. Their presence strongly supports the interpretation that

marine resources played an important role in the local economy.

Chert Tools and Technology

Excavations and surveys at Pir Shah Jurio have revealed various **chert tools**, including blades, cutting implements, and scrapers, demonstrating the technological sophistication of Harappan communities. Research suggests that much of the raw chert material originated from the **Rohri Hills** region of northern Sindh, indicating the existence of exchange networks and resource transportation across considerable distances.

The presence of such tools implies engagement in fishing, food processing, craft production, and everyday domestic activities. Their standardized form also reflects the advanced technological traditions associated with the Indus Civilization.

Shell Objects and Ornaments

Shell bangles and ornamental items crafted from marine shells constitute another important category of finds from Pir Shah Jurio. The utilization of marine shells highlights the inhabitants' close relationship with the coastal environment and demonstrates how natural marine resources were transformed into

decorative and possibly trade-related commodities.

Scientific analyses of pottery and shell artifacts indicate similarities with materials recovered from nearby coastal settlements, suggesting technological continuity and regional interaction among Harappan coastal communities. These findings strengthen the argument that Pir Shah Jurio participated in broader cultural and economic networks extending along the Arabian Sea coastline.

Maritime Economy and Harbor Function

One of the most significant aspects of Pir Shah Jurio is its probable role as a **maritime harbor settlement**. Contemporary archaeological scholarship increasingly recognizes that the Indus Civilization was not exclusively dependent upon agriculture and inland urbanism; rather, it also maintained extensive trade systems facilitated through rivers and maritime routes.

Situated near the mouth of the Hab River, Pir Shah Jurio was strategically placed to function as an intermediary between inland settlements and maritime exchange systems in the Arabian Sea. Marine products, shells, fish, salt, and other

commodities may have been collected, processed, and redistributed through this settlement.

It is also plausible that Pir Shah Jurio formed part of a wider trade network extending indirectly to regions such as the Gulf of Oman and Mesopotamia, areas known to have maintained commercial interactions with the Indus Civilization. In this broader context, Pir Shah Jurio can be interpreted as an important component of the Harappan coastal trading system, illustrating that even relatively small settlements played crucial economic roles within the civilization's integrated network.

Historical Significance of Pir Shah Jurio in the Indus Civilization

The historical significance of Pir Shah Jurio lies in the valuable evidence it provides regarding the maritime expansion, coastal economy, and trade networks of the Indus Civilization. Although the site was relatively small in scale compared to major urban centers, its geographical position and material remains strongly indicate that it functioned as an active coastal settlement.

For many years, scholarly attention within Indus studies focused primarily on major urban centers, while smaller coastal and harbor settlements

received comparatively limited consideration. Recent archaeological research, however, has demonstrated that the economic structure of the Indus Civilization was not solely dependent upon agriculture or inland urban systems; rather, maritime trade, coastal subsistence, and regional interaction also constituted fundamental components of its socio-economic framework. Pir Shah Jurio serves as an important example of this maritime dimension.

The discovery of marine shells, fishing-related artifacts, perforated pottery, and standardized chert tools suggests that the inhabitants had developed a close adaptation to the coastal environment. Such evidence illustrates the environmental intelligence and economic flexibility of Harappan communities.

Research further suggests that settlements such as Pir Shah Jurio functioned as intermediary centers between inland urban regions and maritime trade routes. Through these coastal stations, marine products, raw materials, and manufactured goods were likely exchanged and transported. Consequently, Pir Shah Jurio contributes significantly to our understanding of the integrated commercial system of the Indus Civilization.

Coastal Adaptation and Human Environmental Interaction

Pir Shah Jurio represents not only an archaeological site but also an important example of human adaptation to challenging environmental conditions. Ancient coastal populations had to confront fluctuations in sea level, limited freshwater resources, climatic instability, and uncertain food supplies. Under such circumstances, the inhabitants of Pir Shah Jurio appear to have relied heavily upon marine resources, including fish, shellfish, and mangrove-related ecological products.

Its location near the confluence of the Hab River and the Arabian Sea provided unique opportunities for trade, subsistence, and mobility. At the same time, it is likely that local populations adapted their economic activities seasonally, engaging in limited agriculture during favorable conditions while depending more heavily upon fishing and maritime exchange during drier periods.

Pir Shah Jurio may also have formed part of a broader regional network of coastal settlements, including Balakot, Sutkagen Dor, and Allahdino, through which economic and cultural interactions were maintained.

Preservation Challenges and Contemporary Threats

In the modern period, Pir Shah Jurio faces numerous environmental and human-induced threats. Natural processes such as coastal winds, rainfall, erosion, and shifting river systems have gradually contributed to the deterioration of archaeological remains. Mudbrick structures and fragile material remains have suffered extensive degradation over time.

Furthermore, the presence of a modern shrine and graveyard above portions of the archaeological site has significantly limited opportunities for systematic excavation and scientific investigation. Urban expansion, industrial development, and unauthorized disturbances pose additional risks to the preservation of the site.

Although Pakistan possesses a legal framework for the protection of archaeological heritage, limitations in enforcement, inadequate funding, and insufficient monitoring continue to threaten many important sites. Scholars have therefore emphasized the urgent need for comprehensive archaeological surveys, digital documentation, and controlled excavation at Pir Shah Jurio in

order to preserve valuable historical information before irreversible damage occurs.

Critical Analysis

Despite its archaeological importance, scholarly research on Pir Shah Jurio remains relatively limited, leaving several important questions unresolved. For example, the exact size of the settlement, the nature of its occupation—whether permanent or seasonal—the extent of its harbor activities, and the precise scale of maritime exchange all require further investigation.

Some researchers interpret Pir Shah Jurio as a small seasonal coastal station, whereas others consider it a structured maritime harbor settlement. The reality may lie somewhere between these interpretations, suggesting a modest but strategically significant settlement utilized for specialized economic purposes.

Nevertheless, based on the currently available evidence, it is clear that Pir Shah Jurio occupies an important place in understanding the maritime orientation, environmental adaptation, and coastal economic organization of the Indus Civilization.

Conclusion

Pir Shah Jurio emerges as an important coastal archaeological site of the Indus Civilization, providing valuable evidence regarding maritime life, trade practices, and environmental adaptation in ancient Sindh. Although the settlement does not exhibit the scale or monumentality of major urban centers, its geographical location, recovered artifacts, and utilization of marine resources demonstrate that it formed an active component of the broader economic and cultural system of the Indus Civilization.

The site confirms that the people of the Indus Civilization were not only advanced in urban planning and agriculture but also possessed considerable expertise in maritime trade, fishing practices, and adaptation to coastal environments. The study of sites such as Pir Shah Jurio continues to deepen scholarly understanding of the diverse and multidimensional character of the Indus Civilization.

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Pirak

Introduction

Pirak is an important archaeological site located in the Kachi-Bolan region of Balochistan. It occupies a highly significant place in understanding the period following the decline of the Indus Valley Civilization. The site remained inhabited approximately between 1700 BCE and 700 BCE, making it an important source for studying the transition from the Late Harappan phase to the Early Iron Age.

The significance of Pirak lies in its ability to illuminate the emergence of rural societies, agricultural economies, animal domestication, metallurgy, and regional cultural interactions after the collapse of the urban Harappan system. In particular, evidence of early rice cultivation, representations of horses and Bactrian camels, and terracotta figurines make Pirak a distinctive archaeological site in the ancient history of South Asia.

Geographical Setting and Natural Environment

Pirak is situated in the Kachi Plain of Balochistan, a region historically favorable for agriculture and human settlement. The site lies approximately 11 kilometers south of the town of Sibi and east of the Nari River, which forms part of the Bolan river system. The river served as an important source of water for agricultural activities in the region.

The geographical location of Pirak is especially significant because it was situated near ancient routes of trade and cultural interaction connecting Balochistan, Sindh, Afghanistan, and Central Asia. Consequently, the site functioned not only as a local center of settlement but also as an important point of regional communication.

Environmentally, the region is characterized by a semi-arid climate with limited rainfall. Nevertheless, seasonal floods and riverine activity contributed to soil fertility. Under such environmental conditions, irrigation-based agriculture played a crucial role in sustaining the settlement and supporting social and economic stability.

Discovery and Archaeological Excavations

Pirak was first identified in 1963 by Robert Raikes during geological and archaeological surveys of the region. Following the recognition of its historical significance, systematic archaeological excavations were initiated.

Between 1968 and 1974, extensive excavations were conducted by the French Archaeological Mission in the Indus. The work was initially supervised by the French archaeologist Jean-Marie Casal and later completed by Jean-François Jarrige in collaboration with Pakistan's Department of Archaeology.

Excavations across approximately 12 hectares revealed residential structures, pottery, seals, metal tools, animal remains, and botanical evidence belonging to different periods of occupation. These findings demonstrate that Pirak was a continuously inhabited settlement that evolved over several centuries.

Historical Importance of Pirak

Pirak is often described as a "bridge between the Indus Civilization and the Iron Age" because it represents a transitional period during which the great urban centers of the Indus Valley were declining, while human communities adapted to new rural and agrarian forms of life.

The archaeological evidence suggests that:

1. Several Harappan traditions continued to survive;
2. New agricultural technologies emerged;
3. Animal domestication and transportation practices evolved;
4. The use of iron tools gradually increased.

The study of Pirak further demonstrates that the decline of the Indus Civilization did not signify the complete collapse of society. Instead, communities adapted and continued to develop within new local and rural frameworks.

Chronological Periods of Pirak

Archaeological excavations indicate that Pirak remained inhabited for more than a thousand years. Scholars have broadly divided the development of the site into three major chronological phases, each reflecting significant social, economic, and technological transformations.

Period I: Early Settlement Phase (c. 1700–1500 BCE)

The earliest phase of Pirak belongs to the period following the decline of the Indus Valley

Civilization, when major urban centers were gradually abandoned and replaced by smaller agrarian settlements. During this stage, Pirak emerged as a modest yet organized rural community.

Residential structures of this period were primarily constructed from mud bricks and built upon elevated platforms to protect inhabitants from seasonal flooding. The houses exhibit a relatively simple architectural style, although evidence of organized rooms, wall niches, and planned arrangements indicates a certain level of social order and settlement planning.

Pottery from this phase was predominantly handmade and decorated with finger impressions, appliqué clay bands, and simple ornamental motifs. These vessels were mainly intended for domestic use, including food preparation, storage, and agricultural purposes.

Period II: Cultural Continuity and Technological Advancement (c. 1500–1200 BCE)

The second phase represents a period of social continuity and increasing technological sophistication. While settlement patterns remained consistent with earlier occupations,

important developments in material culture became evident.

One of the most significant changes was observed in pottery production. Alongside handmade ceramics, wheel-made pottery became increasingly common. This technological innovation produced more symmetrical, durable, and refined vessels, suggesting growing specialization in craftsmanship and local production techniques.

Metallurgical development also expanded during this period. Copper and bronze objects—including knives, arrowheads, ornaments, and agricultural implements—have been recovered from the site. At the same time, early evidence of iron use began to appear, providing valuable insight into the emergence of iron technology in South Asia.

Architectural Structure and Settlement Pattern

Archaeological evidence suggests that Pirak was not an unplanned rural village but rather an organized settlement with clearly structured habitation zones. Excavations uncovered orderly house layouts, storage facilities, elevated foundations, and carefully arranged living spaces.

The buildings were primarily constructed using unbaked mud bricks made from locally available materials. Elevated platforms formed the foundation of many structures, likely serving as protection against seasonal flooding, soil moisture, and environmental instability.

Unlike the major urban centers of the Indus Civilization, Pirak lacks monumental buildings, palaces, public architecture, or sophisticated drainage systems. This absence indicates that the society of Pirak functioned as a rural agrarian settlement rather than a large urban center.

Material Culture

Pottery

A substantial quantity of pottery has been recovered from Pirak, providing valuable evidence for understanding daily life and economic activity. These ceramic vessels were used for:

- Storage of grain and water
- Cooking and food preparation
- Preservation of agricultural produce
- Everyday domestic purposes

The pottery displays simple decorative features, including finger impressions, clay bands, and

occasionally geometric designs. These stylistic elements indicate a continuation of Late Harappan ceramic traditions, though adapted to local conditions.

Terracotta Figurines and Symbolic Culture

Terracotta figurines represent one of the most remarkable categories of material culture discovered at Pirak. These figurines include:

- Horses
- Bactrian camels (two-humped camels)
- Human figures
- Mounted riders

These objects are significant not merely as artistic expressions but also as indicators of social and economic change. In particular, depictions of horses and camels suggest developments in transportation, trade, and animal domestication.

The evidence for horses at Pirak has attracted considerable scholarly attention because it contributes to ongoing debates regarding the early presence of domesticated horses in South Asia after the decline of the Indus Civilization.

Seals, Metallurgy, and Technological Development

Archaeologists have also discovered circular and square terracotta seals engraved with geometric patterns. These seals may have served administrative, commercial, or ownership-related purposes.

From a technological perspective, the increasing use of copper, bronze, and eventually iron demonstrates a process of gradual social and economic advancement. Such developments indicate that the inhabitants of Pirak were not merely focused on subsistence but were actively engaged in technological innovation and craft specialization.

Agricultural Economy and Irrigation System

The economic foundation of Pirak was primarily based on agriculture. Archaeological and archaeobotanical studies reveal that the inhabitants cultivated a variety of crops essential for subsistence, economic stability, and social continuity.

Botanical remains recovered from the site include rice, wheat, barley, sorghum, chickpeas, and grapes. Among these, rice cultivation is of particular significance, as Pirak represents one of the earliest known examples of rice agriculture in the Balochistan region. This suggests that the

inhabitants were not solely dependent on dry farming but also possessed knowledge of organized irrigation systems.

Due to its proximity to the Nari River, the inhabitants likely utilized seasonal flooding and river water for agricultural purposes. Despite the semi-arid climate, irrigation-based farming played a central role in sustaining settlement life over several centuries. This continuity demonstrates that agricultural knowledge and water management practices did not disappear after the decline of the Indus Civilization but continued in modified local forms.

Animal Domestication and Economic Life

Animal husbandry constituted another important component of Pirak's economy. Excavations have yielded substantial remains of sheep, goats, and cattle, indicating that pastoralism played a major role in daily subsistence and economic organization.

Particularly significant is the evidence for horses and the two-humped Bactrian camel. Horse bones and terracotta figurines recovered from Pirak provide important evidence regarding the early presence of horses in South Asia. Some figurines depict mounted riders on horses or camels,

suggesting their use in transportation, mobility, and perhaps trade.

The Bactrian camel, commonly associated with Central Asia and Afghanistan, is especially important because its presence at Pirak points toward regional interaction and broader cultural exchanges. This evidence indicates that Pirak was connected to larger networks of communication and exchange extending beyond Balochistan.

Links with the Indus Valley Civilization

Pirak is frequently regarded as an important link between the Indus Valley Civilization and later regional developments. Although it did not resemble major urban centers such as Mohenjo-daro or Harappa, several features of the site reflect the continuity of Harappan traditions.

For example:

- Certain pottery styles exhibit Late Harappan influences;
- Geometric patterns on seals resemble earlier traditions;
- Agricultural foundations remained central to economic life;
- Terracotta models and animal figurines continued long-standing artistic practices.

These continuities suggest that the collapse of the urban Harappan world did not result in a complete cultural disappearance. Instead, many traditions survived and evolved within new rural contexts.

At the same time, Pirak differed significantly from the Mature Harappan urban system. The absence of urban planning, baked brick architecture, advanced drainage systems, and the Indus script indicates that society had transformed into a more localized and agrarian form.

Regional and Intercultural Connections

The material culture of Pirak demonstrates that the site was not isolated but maintained connections with Balochistan, Afghanistan, Iran, and Central Asia.

The presence of horses, Bactrian camels, advancements in metallurgy, and distinctive figurine traditions suggest interactions with neighboring cultural regions. Such exchanges were likely facilitated through ancient trade routes linking Balochistan to northern and western territories.

In this broader context, Pirak may be understood as a transitional cultural center where Harappan

traditions, local developments, and external influences combined to produce new social and economic forms.

Archaeological Importance: A Critical Evaluation

The significance of Pirak lies not merely in its status as an ancient settlement but in its contribution to understanding a poorly documented transitional era in South Asian history.

The site provides several important conclusions:

1. Human settlement continued after the decline of the Indus Civilization;
2. Agricultural systems, especially rice cultivation, expanded under new environmental conditions;
3. Animal domestication and transportation practices underwent significant change;
4. Metallurgical development progressed from copper toward iron technology;
5. Local and interregional cultural interactions remained active.

From a critical perspective, however, further archaeological excavation, scientific analysis, and interdisciplinary research remain necessary. Several questions—such as the exact nature of

horse domestication, the mechanisms of cultural transition, and the scale of regional trade—are still subjects of scholarly debate.

Conclusion

Pirak is one of the most significant archaeological sites for understanding the post-Indus period in the history of Balochistan and South Asia. The site demonstrates that the decline of the Indus Civilization did not result in complete societal collapse; rather, communities adapted to changing circumstances and continued their development through new economic, agricultural, and social structures.

The evidence of agriculture, irrigation, animal domestication, metallurgy, and cultural continuity at Pirak highlights the resilience and adaptability of ancient societies in the region. Therefore, Pirak should be understood not merely as an archaeological site but as a vital testimony to the historical continuity between the Indus Civilization and later regional cultures.

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Pokrān

Introduction

Pokrān is one of the important archaeological sites in Sindh that contributes to the understanding of the early cultural development of the Indus Valley Civilization. The material remains discovered at this site are associated with pottery recovered from the lower levels of the Amri cultural sequence, indicating that Pokrān belonged to the pre-urban or rural cultural phase of the Indus Civilization. Due to its geographical location and archaeological significance, Pokrān is regarded as an important reference point in the study of early rural settlements in ancient Sindh.

Geographical Location

The ancient settlement of Pokrān is situated on the summit of the Pokrān hills, south of Pokrān Barghal. Its elevated position suggests that the inhabitants may have selected the location for defensive purposes, environmental protection, or easier access to natural resources.

Settlements established on hilltops often provide valuable information regarding settlement planning, geographical awareness, and resource utilization in ancient societies.

Archaeological Evidence and Material Culture

The archaeological remains recovered from Pokrān are associated with pottery found in the lower levels of the Amri cultural phase. The Amri culture represents the early or pre-Harappan stage of the Indus Valley Civilization, characterized by rural communities, agrarian economies, and local craftsmanship.

Archaeologists have also discovered traces of walls at the site, indicating the presence of structured architectural activity within the settlement. These remains suggest that dwellings may have been constructed using mud or stone, reflecting local building traditions.

In addition, the pottery tradition of Pokrān has been described as distinctive in character. The shape, craftsmanship, and manufacturing techniques of the pottery provide important evidence regarding the artistic skills, social needs, and cultural identity of the inhabitants. Such ceramic traditions may also reflect regional cultural characteristics.

Historical Significance

The significance of Pokrān lies in its contribution to understanding the rural cultural traditions of ancient Sindh. Material remains associated with the Amri period indicate that the settlement belonged to an agrarian society in which handicrafts, particularly pottery production, likely played an important economic role.

The presence of wall remains and a distinctive ceramic tradition further suggests the existence of social organization and early technological development, elements that later evolved into more advanced forms within the urban centers of the Indus Valley Civilization.

Conclusion

Pokran emerges as an important rural settlement among the archaeological sites of Sindh, closely associated with the Amri cultural tradition. The pottery remains, architectural traces, and distinctive ceramic craftsmanship discovered at the site demonstrate that it was an important center of socio-cultural activity during the pre-urban period. Further archaeological investigation and scientific excavation may provide a deeper understanding of the site's historical significance and cultural connections.

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